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ABSTRACT

In light of the difficulty in making a differential diagnosis among educable mentally retarded (EMR), emotionally handicapped (EH), and learning disabled (LD) students considering only their behavioral characteristics, a study was done to generate descriptive data regarding the behavioral characteristics of such students. Sixty EMR, EH, LD, and normal students (ages 11 and 12 years) were observed in regular classroom and resource room situations by three observers. The results indicated, among other things, that the behavior counting checklist used adequately discriminated between exceptional and normal Ss. Differences in behavioral characteristics among the three categories of exceptional Ss were also indicated. When exceptional Ss were observed in the regular classroom, their behavior was extremely variable, and a higher mean frequency of nontask oriented behavior was exhibited by all three groups. Observations in the resource room showed lower mean frequencies for nontask oriented behavior and a greater mean frequency of task oriented activity. The accuracy of measurements made by observers yielded reliability and agreement coefficients of sufficient magnitude to generalize results. (Author/DLS)

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FINAL REPORT

Behavioral Characteristics of Educable Mentally Retarded, Emotionally Handicapped, and Learning Disabled Students

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BEHAVIORAL CHARACTERISTICS OF EDUCABLE MENTALLY RETARDED, EMOTIONALLY HANDICAPPED, AND LEARNING DISABLED STUDENTS

By

STANLEY A. SHERRY

A DISSERTATION PRESENTED TO THE
GRADUATE COUNCIL OF THE UNIVERSITY OF FLORIDA
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

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Abstract of Dissertation Presented to the Graduate
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Degree of Doctor of Philosophy

BEHAVIORAL CHARACTERISTICS OF EDUCABLE MENTALLY RETARDED, EMOTIONALLY HANDICAPPED, AND LEARNING DISABLED STUDENTS

By

Stanley A. Sherry

August, 1979

Chairman: Rex E. Schmid
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Major Department: Special Education

Recent literature has suggested that it is difficult to make a differential diagnosis among educable mentally retarded (EMR), emotionally handicapped (EH), and learning disabled (LD) students when only the behavioral characteristics of each group are considered. No empirical research has been undertaken to quantify similarities or differences in the behavioral characteristics of these categories of exceptional students in the public schools. This study was an attempt to generate descriptive data regarding the behavioral characteristics of these children in the public school setting by employing a direct observational technique.

Sixty 11 and 12 year old children were observed in the public schools. Fifteen students from each category of exceptionality

(i.e., EMR, LD, EH) were observed in the regular classroom and special education resource room. Fifteen non-handicapped students were also observed. They served as a control group to evaluate the effectiveness of a behavior counting checklist to discriminate between exceptional and non-handicapped students.

Three observers tallied frequencies of operationally defined categories of non-task oriented and task oriented classroom behaviors for all exceptional children in the regular classroom and special education resource room. Two separate analysis of variance procedures were performed. Mean frequencies of behavior are displayed in graphic form for each exceptionality for each classroom situation for non-task oriented and task oriented behavioral dimensions.

The results indicated that the behavior counting checklist adequately discriminated between exceptional students and non-handicapped students. Differences in behavioral characteristics among the three categories of exceptionality were indicated. When exceptional students were observed in the regular classroom their behavior was extremely variable and a higher mean frequency of non-task oriented behavior was exhibited by all three groups. Observations in the special education resource room showed lower mean frequencies for non-task oriented behavior and a greater mean frequency of task oriented activity.

Reliability measures were computed for (1) a coefficient of observer agreement and (2) a reliability coefficient using an

analysis of variance procedure. The accuracy of measurements made by observers yields a coefficient of sufficient magnitude to generalize results.

Results of the investigation are discussed with regard to the labeling and placement of exceptional children in special educational programs. Also considered are the efficacy of special education resource room programs, noncategorical special education models, and implications for teacher preparation.

CHAPTER I

INTRODUCTION

The present practice of placing students in special classes on the basis of diagnostic category (i.e., educable mentally retarded, emotionally handicapped, learning disabled) does not possess the logical appeal that grouping in terms of behavioral characteristics provides (Hallahan & Kauffman, 1976, 1977). This notion has provided the impetus for the increase in the popularity of noncategorical special education. This movement has occurred for at least two reasons. First, widespread disenchantment with "labeling" has lead many special educators to conclude that placing children in categorically labeled classrooms is an unacceptable practice. Second, there is no rational basis, in terms of instructional efficacy, for grouping in accordance with categorical labels now in use (Hallahan & Kauffman, 1977).

Attempts have been made at noncategorical descriptions of exceptional children (Iscoe, 1962; Quay, 1968). But, these have not had the impact on special education as those which have emerged from actual school programs (Birnbauer & Lawler, 1964; Hewett, 1968; Taylor, Artuso, Soloway, Hewett, Quay, & Stillwell, 1972). Hewett (1974) has described noncategorical school program concepts.

Included in his noncategorical special education textbook is a description of the psychology of all exceptional children along four basic dimensions of human functioning related to adaptation to the physical environment, sociality, intelligence, and potential adult status. The education of all exceptional children is treated in reference to a hierarchy of learning levels. Each child is described in relation to this hierarchy of educational goals based on observable behavior. Basic classroom difficulties are managed in terms of a child's ability to attend to tasks, to follow directions, to function independently of the teacher, to function socially, and to acquire academic skills.

Hewett (1974) has interwoven nearly all significant research and curriculum literature from nine traditional categories of exceptional children within these dimensions. What emerged is that there are far more similarities among categories than differences. In short, Forness (1976) concluded that special education practices can be conceptualized more effectively outside of traditional labeling and categorical distinctions.

However, there exists no empirical research data to provide support for or against noncategorical special education programs. The purpose of this study is to provide empirical data about one dimension of functioning of exceptional students in the classroom. The notion of behavioral characteristics among samples of educable mentally retarded (EMR), emotionally handicapped (EH), and learning disabled (LD) students (i.e., the mildly handicapped) was examined.

Based on the premises forwarded by Forness (1976), Hallahan & Kauffman (1976, 1977), and Hewett (1974) specific observable classroom behaviors were quantified. The behavioral characteristics evaluated by present research includes those behaviors which an exceptional child exhibits in the classroom that affect his ability to attend to tasks, follow directions, function independently of the teacher, and function socially in the classroom.

The classroom behaviors observed have been operationally defined by Becker, Madsen, Arnold, & Thomas (1967) and Walker, Mattson, & Buckley (1971). Specific behaviors observed included: (1) gross motor behaviors, (2) disruptive noise, (3) disturbing others, (4) orienting responses, (5) blurting out, (6) talking, (7) ignoring teacher, (8) improper position, (9) task oriented independent, and (10) task oriented dependent behaviors. The first eight definitions or categories of behaviors may be described as behaviors that interfere with an exceptional child's success in the classroom (i.e., non-task oriented behaviors). The last two definitions of behaviors (9 and 10) include appropriate behavioral responses for students in the classroom (see Appendix A). This broad classification of classroom behaviors was designed to assess the extent of observable behavioral overlap among the categories of EMR, EH, and LD students.

In summary, the purpose of this study was to provide empirical data on the extent of overlap of specific observable behavioral characteristics among samples of educable mentally retarded,

emotionally handicapped, and learning disabled students in the classroom. To date empirical studies have not been undertaken to provide clarification of special class placement on the basis of behavioral characteristics. Quantification of observable classroom behaviors of EMR, EH, and LD students may provide support for theoretical considerations that base special class placement on behavioral characteristics.

Justification of the Study

Recent literature has suggested that it is difficult to make a differential diagnosis among educable mentally retarded (EMR), emotionally handicapped (EH), and learning disabled (LD) students when only the behavioral characteristics of each group are considered. Behaviors of EMR, EH, and LD students are so closely intertwined that accurate differentiation is often impossible (Benda, 1954; Bialer, 1970; Cantor, 1960; Lilly, 1977; Milgram, 1972). Neisworth and Greer (1975) suggested that diverse causes could produce similar functional problems and that attention to relevant instructional dimensions (i.e., stimulus organization, intensity, etc.) was more important than instruction based on categorical handicap. Hallahan and Kauffman (1976, 1977) noted that similarities in etiologies and interventions as well as characteristic behaviors make differential diagnosis of exceptional children difficult and sometimes irrelevant.

In 1972, the Department of Health, Education and Welfare commissioned a systematic review of the classification and labeling of children. The findings of the study commissioned were presented by Hobbs (1974, 1975). As a result of the study it was recommended that a priority be placed on the development of improved classification systems for exceptional children. It was reported that the knowledge base for classifying children and designing appropriate programs for them is inadequate (Hobbs, 1975). Research must be undertaken to improve the presently used classification systems.

Most states currently provide services to exceptional children based upon various categorical labels. An educable mentally retarded student is often one who is impaired in intellectual and adaptive behaviors and whose development reflects his reduced rate of learning (Florida Department of Education, 1976; Kirk, 1964). The emotionally handicapped student is one who exhibits persistent and consistent severe behavioral disabilities which consequently disrupt his own or others' learning processes (Reinert, 1976). For the emotionally handicapped child the inability to achieve academic progress or satisfactory interpersonal relationships cannot be attributed to physical, sensory, or intellectual deficits (Florida Department of Education, 1977).

Learning disabled students exhibit disorders in one or more of the basic psychological processes involved in understanding or using spoken or written language. These may be manifested in

disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. Included are conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional handicaps, or environmental disadvantage (National Advisory Committee on Handicapped Children, 1968).

Behavior of retarded children is generally attributed to cognitive variables, emotionally handicapped behavior to personality variables, and learning disabled behavior to perceptual variables. However, retarded individuals and learning disabled students are influenced by social-emotional variables in addition to cognitive variables or disabilities. Equally, inappropriate behavior in the emotionally handicapped may be attributed to disturbances in perceiving and thinking. Future theoretical formulations should attempt to encompass characteristics within all three fields. The major shift in emphasis from differential diagnosis to delineation of behavioral patterns within the individual has been an encouraging development (Forness, 1974, 1976; Milgram, 1972).

Measured intelligence is one variable that can separate the EMR child from the EH and LD child. Becker (1978) identified several areas in which the performance of "educationally handicapped" and educable mentally retarded children could be differentiated; however, he suggested that the differences were no doubt

due to "differences in IQ and mental age between the groups" (p. 503). Becker also suggested that the observed differences may have been related to differences in other behaviors of the children (i.e., attending, following directions). He suggested that it would seem that a productive area of research would be that of identifying the extent to which the classroom behaviors of these exceptional children are different.

Social and emotional adjustment is frequently used as an indicator of a differential diagnosis between the groups. Emotionally handicapped students are defined by the degree of maladjustment they exhibit. Hallahan and Kauffman (1976) state that mentally retarded individuals and learning disabled children also exhibit poor adjustment in interpersonal relationships. Therefore, the distinction among the EMR, the EH, and the LD child is even more difficult to assess. Maladaptive behavior is responsible for the initial referral for special educational and psychological evaluation. The evaluation then categorizes the student, placing a label on him based on traditional diagnostic procedures.

When examined from a behaviorist viewpoint, that all behavior is learned and that learning takes place as a result of consequent reinforcement or punishment of behaviors, there is little difference in theoretical etiologies of the educable mentally retarded, the emotionally handicapped, and the learning disabled (Hallahan & Kauffman, 1976, 1977). Mental retardation (Bijou, 1971), emotional

handicaps (Ferster, 1961; Haring & Phillips, 1962), and learning disabilities (Lovitt, 1967; Wallace & Kauffman, 1973) have all been considered within the behavioral framework. These authors provide evidence that none of the categories of exceptionality is unique with regard to environmental causes.

Many mildly retarded students and emotionally handicapped students exhibit characteristics that fit the learning disabilities concepts and definitions. All three exceptionalities respond to similar teaching methods (Hallahan & Kauffman, 1976; Lerner, 1976). Everything else being equal, the EMR hyperactive student with a figure-ground reversal problem, the EH student with a figure-ground reversal problem, the LD student with a figure-ground reversal problem can all be taught in the same manner (Hallahan & Kauffman, 1976).

Statement of the Problem

While considerable effort has been devoted to the study of differences in the behavior of learning disabled and normal children (Bryan, 1974a; Bryan & Wheeler, 1972), no systematic attempt has been made to compare the classroom behavior of EMR, EH, and LD children. The purpose of this investigation was to provide empirical data regarding the commonality of the behavioral characteristics for the populations of EMR, EH, and LD students. It was hypothesized that when comparing groups of educable mentally retarded, emotionally

handicapped, and learning disabled students in the public schools no differences would be observed in the selected behavioral characteristics among groups.

Delimitations

The primary delimitation of the study may be the geographic location of the investigation. Data collection took place in the Hillsborough County Public Schools. Hillsborough County encompasses the metropolitan Tampa, Florida, area. Included in this system is a major urban center, an extensive suburb, and a large rural component.

Hillsborough County closely approximates national statistical averages in regard to demographic data. In July, 1977, the distribution of white and non-white populations for Hillsborough County was almost equal to that of the United States national distribution. For Hillsborough County the white population totaled 86.1%. The U.S. distribution of white population equalled 86.7% (Office of Planning Research, 1978). Number of members per household were roughly equivalent with Hillsborough County's average being 2.77 and the U.S. average equal to 2.89 (U.S. Census Sales and Marketing Management Survey, 1977). Median age of population for both Hillsborough County and the United States are similar; 30.5 for Hillsborough County and 29.8 for the U.S. (Office of Planning Research, 1978).

In 1976, the percent of population employed in various field was also similar for the U.S. and Hillsborough County. Employment in manufacturing, construction, wholesale and retail trade, government, and finance, real estate and insurance were all within six percentage points of each other (Bureau of Economic Analysis, 1979).

These statistical data on the demographics of the metropolitan Tampa area are included to suggest that data obtained from a random sample in Hillsborough County Public Schools may be somewhat more generalizable to other locales than data obtained in another location.

Summary

Given the current state of our knowledge and the intimate relationships among mental retardation, emotional handicaps, and learning disabilities, the diagnostic goal is to aid the individual in developing behaviors that are acceptable to societal standards. The advocate of behavior modification is not concerned with the diagnostic label of the student; but, instead is concerned with the behavioral characteristics of the child. The collection of empirical data should point out the weaknesses of our diagnostic categories when behaviors exhibited by each group are compared.

The impetus begun by the Federal government's commissioning of studies to examine the appropriateness of presently used

diagnostic categories may be further extended by the present study. The technical adequacy of diagnostic and classification systems has been questioned. Clarification of behavioral characteristics of educable mentally retarded, emotionally handicapped, and learning disabled students may provide empirical evidence for the reorganization of categorical classifications of mildly handicapped students based on observed classroom behaviors.

CHAPTER II

REVIEW OF RELATED LITERATURE

Special educators have become increasingly concerned in the past few years about the use of diagnostic or categorical labels in the identification of exceptional students. Disenchantment with labeling children has led many professionals to conclude that placing children in categorically labeled classrooms is an unacceptable practice with no rational basis (Hallahan & Kauffman, 1977).

This review of related literature pertains to studies and positions presented by educators concerning the categorication of exceptional students. The review concerns the following three topics: (1) the use of categorical labels, (2) definitions of exceptional student categories, and (3) the noncategorical movement.

Uses of Categorical Labels

Special education has historically tended to conceive of each category of exceptional child as a distinct and separate unit. A child who is mentally retarded has been treated differently than a child with emotional problems or a child with

learning disabilities. Each type of child was assigned to separate special classes taught by teachers who were trained to teach one area of exceptionality. This traditional categorical system of classification and placement required specific differential diagnosis. Emphasis was placed on etiology that resulted in unique characteristics for each group.

Positive Uses of Labels

The labels applied to exceptional children served specific purposes for the special educator. Gallagher (1976) identified three positive uses of labeling children for special education. The first of these purposes is that labels provide a means for providing a classification, diagnosis, and treatment sequence. This standard use of labeling provides the basis for some type of differentiated treatment. The label placed on a child creates a very different type of treatment program. The earlier in the child's life that this differentiation is made, the more effective the treatment program can become (Bower, 1960; Keogh & Becker, 1973; Martin, 1972). Gallagher (1976) states that if there is differentiated treatment available and it depends on effective diagnosis and classification then labeling is the first step in a process of effective treatment.

The second purpose of labeling a child provides the basis for further research. New research will give more insight into the etiology of the problem. As a result of inquiry into etiology,

prevention and treatment possibilities for each category of exceptionality may be improved (Cruickshank, 1972; Kramer, 1975; MacMillan, Jones, & Aloia, 1974). Without making categorical distinctions educators and physicians cannot discover causes of various disorders.

Finally, the third purpose of labeling a child is to obtain financial support for research, training, and delivery of services for the child. Gallagher, Forsythe, Ringelheim, and Weintraub (1975) reported that an increase of 300 percent in the money provided for special education for handicapped children from 1966-1972 was the result of categorical classifications. Legislative action designed to aid the handicapped has also been based on labels and categories of special students (Trudeau, 1972).

Negative Uses of Labels

Gallagher (1976) described three negative purposes of labeling. The first purpose provides a means for tranquilizing professionals. They can apply labels to children without following differentiated programs of treatment, i.e., labels are applied to fill a need for closure on a difficult diagnostic issue. The second negative use of a label is that a label can serve as a means to maintain a social hierarchy. By keeping minority children away from educational opportunities many may be forced to remain at the bottom of the social ladder. The basic purposes of special education programs were distorted in some situations, in order to remove troublesome

minority group children from regular education programs. Special education has been used as "an exclusionary process disguised as a remedial process" (Gallagher, 1976, p. 4).

Garrison and Hammill (1971) reviewed the cases of 250 children in special education classes in Philadelphia and found that placement was inappropriate for nearly two-thirds of the children. They suggested that these classes were filled with children whose behavioral problems were unacceptable in the regular classroom. These children invariably came from minority groups and low socio-economic backgrounds. Findings like these lead to major legal battles to reaffirm the rights of the handicapped and the rights of those who were wrongly labeled handicapped (Gilhool, 1972).

The third negative use of labeling focused problems on the individual. It ignored the complex social and ecological issues that needed reform (Gallagher, 1976). Needed social reform was allayed because it was the child who was labeled that needed a specific treatment program, not the society that produced that child.

Ryan (1971) suggested that the "exceptionalistic" approach to special children focused on problems that are seen as unusual and as a result of an individual defect. These problems must be remediated by programs designed for the individual. On the other hand, a "universalistic" viewpoint called for social intervention on a broader scale than just the individual child. Social problems exhibited by difficulties within the child were a function

of the social arrangements of the community or society. The individual problems exhibited by children could not be remediated until the environment from which they came was treated.

MacMillan, Jones, and Aloia (1976) note that those children over whom the debate of labeling rages do not appear to benefit from their educational experiences whether they are labeled or not. They state that the task confronting special educators is to provide the best educational experience possible for these children. The primary task is to teach children to learn skills and attitudes necessary for success in society.

Dissatisfaction With the Labeling Process

The factors that contribute to the negative uses of labels for exceptional students have provided the impetus for the practice of labeling becoming a major social issue. To address this issue, in 1972, Health, Education, and Welfare Secretary Elliott L. Richardson commissioned a systematic review of the classification and labeling of children. As a result, the assessment of the consequences and procedures of labeling were examined by Nicholas Hobbs in an extensive review of all aspects of the topic. The findings of the Hobbs' study are presented in detail in two publications, Issues in the Classification of Children (Hobbs, 1975) and a summary report, The Futures of Children: Categories, Labels, and Their Consequences (Hobbs, 1974).

The objectives of the project were (1) to increase public understanding of problems associated with the classification and

labeling of handicapped, disadvantaged, or delinquent children; (2) to provide a rationale for public policy and practical suggestions for administrative guidelines bearing on classification and its consequences; and (3) to improve the performance of professionals responsible for the well-being of exceptional children (Hobbs, Egerton, & Matheny, 1975). The project focused on four major considerations:

(1) the technical adequacy of diagnostic and classification systems;

(2) the effects of labeling on individual children;

(3) the consequences (such as special class placement) that may develop as a result of classification; and

(4) the legal, social, and ethical implications of classifying and labeling children (Hobbs, 1975).

As a result of the study, seven priority recommendations were made. These recommendations were developed because of their need for immediate attention, their urgency, and their long range significance. These priorities include (1) support for parents, (2) improved residential programs for children, (3) fairness to disadvantaged and minority group children, (4) improved classification systems, (5) better organization of services, (6) help for children excluded from school, and (7) new knowledge for classifying children (Hobbs, 1975).

For the purposes of this discussion the priority of improved classification systems is of primary importance. The priority for

better classification systems called for a procedure to provide a better knowledge base about exceptional children and to provide improved programming for those children. Hobbs (1975) stated that a classification system is needed that may help understand the character and causes of handicapping conditions. Increased information for the planning of programs, the delivery of services, and the determination of accountability must be available. At the same time, improved classification is needed to decrease the possibilities of inappropriate treatment and to remove the stigma that may burden the labeled child.

Hobbs (1975) further stated that the knowledge base for classifying children and designing appropriate programs for them is inadequate. Major policy changes are adopted without evidence of their effectiveness. Research must be provided to improve classification systems themselves.

Blatt (1972), Dunn (1968), Johnson (1969), and Jones (1972) have all discussed the detrimental effects of labeling a child. But, the empirical literature provides no conclusive evidence for or against the labeling controversy (MacMillan et al., 1974). However, the majority of special educators view labeling as detrimental. This view seems to have been unchallenged especially when the accounts of litigation are considered.

Guskin (1974) responds to the controversy by stating that special educators should move from speculation and research activities to the development of appropriate evaluation activities

aimed at modifying the negative affects of labeling. Rowitz (1974) advocated the opposite point of view by stating that each step in the labeling process must be studied. Initial behavioral observations, the labeling event, and treatment decisions require direct examination so that better programs may be planned for exceptional children.

Summary

Although the negative effects of labeling appear to outweigh the positive effects the controversy continues. Recommendations for improving the provision of services for handicapped children have been made but change has been slow in coming. Traditional evaluation and placement procedures have been modified as a result of the mainstreaming movement, but most states still maintain a categorical system of identification and placement for exceptional children (Epstein, Cullinan, & Sabatino, 1977). The definition of categories has also made placement decisions difficult as will be described below.

Definitions of Exceptional Student Categories

A broad set of complications in the classification of children has come from special education professionals. Children are sifted into a variety of categories, i.e., educable mentally retarded, emotionally handicapped, and learning disabled. These three groups will be examined more closely to determine the effectiveness of labels placed on students by special educators.

Educable Mentally Retarded

When considering the categories of educable mentally retarded (EMR), emotionally handicapped (EH), and learning disabled (LD) as distinct and unique classifications the fact is that each of their definitions reflects a great deal of confusion (Hallahan & Kauffman, 1977). They are far from being precise. There is overlap among the definitions that makes a conclusive differential diagnosis of mildly handicapped students difficult.

In 1973, the American Association on Mental Deficiency (AAMD) published a revised manual on terminology and classification for mentally retarded individuals. The definition of mental retardation from that manual states that "mental retardation refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period" (Grossman, 1973, p. 11). This revised definition sets the upper limit on mental retardation at two standard deviations below the mean on individual intelligence tests. The new definition has eliminated a large number of children from the category of mental retardation. Children with an IQ between 69 (or 71 depending on whether the Binet or WISC is used) and 85 are no longer considered retarded. Hallahan and Kauffman (1976, 1977) state that when large numbers of children once considered retarded are not retarded any more simply due to a change in definition, the original definition must not have been a very stable one.

The change in the definition of mental retardation has had critical implications for the field of learning disabilities. It would be naive to believe that children with IQs between 69 and 85 could easily be integrated into the regular classroom. The change in the AAMD definition will have the effect on children who were once labeled as mentally retarded. Overnight they will become labeled learning disabled (Hallahan & Kauffman, 1977).

Learning Disabilities

Lilly (1977) reported a study of the acceptability of ten different definitions of learning disabilities. Eighty-seven respondents including teachers, speech therapists, directors of special education, school nurses, and school psychologists ranked the following definition as preferable:

> A child with a learning disability is any child who demonstrates a significant discrepancy in acquiring the academic and social skills in accordance with his assessed capacity to obtain these skills. In general these discrepancies are associated with specific disabilities such as: gross motor, visual memory, visual discrimination, and other language related disabilities. (p. 116)

Gearhart (1973) cites four generalizations which tend to describe various definitions of learning disabilities: (1) most definitions refer to both the child's capacity to learn and his/her present level of functioning; (2) some definitions assume a central nervous system dysfunction; (3) most definitions exclude the culturally disadvantaged; and (4) most definitions exclude other special education categories, such as emotional handicaps and mental retardation.

These generalizations reinforce the notion that as a category learning disabilities is a "between the cracks" category, meant to include children not includable in other special education categories. The exclusion clause indicated there are problems in the definition (Hallahan & Kauffman, 1977).

Definitions of learning disabilities have been criticized for ambiguity and failure to be operationally defined (Lilly, 1977; Weiderholt, 1974). In fact, Lilly (1977) asserts that a clear statement is needed that reliably and consistently differentiates children labeled LD from those not labeled LD. With regard to differential diagnosis, it cannot be maintained that LD represents a homogeneous group of children distinctly different from other groups (Lilly, 1977). Forness and Langdon (1974) noted that there were "many more similarities than differences across categories" (p. 92) (i.e., EMR, EH, and LD). Within the category of LD, Gearheart (1973) listed nine characteristics of LD children. Some of these characteristics (e.g., hyperactivity and hypoactivity) are exact opposites of each other.

Weiderholt (1974) states that "the heterogeniety of children currently categorized and served as learning disabled defies a concise specific definition" (p. 28). Bryan (1974a) also points out that it has not been empirically demonstrated that children labeled as LD differ from "normal children" on such factors as auditory perception, auditory discrimination, visual perception, distractability, hyperactivity, or presence of signs of neurological effects.

Lilly (1977) reports that even some of the proponents of differential diagnosis for learning disabilities are willing to admit that there is not enough evidence to show that minimal brain dysfunction exists in learning disabled children. Hartman (1973) who states that minimal brain dysfunction is a necessary element of LD, writes:

> It is not possible to differentiate between learning disabled and culturally disadvantaged with much accuracy on the basis of psychometric instruments, and although differential programming may not be appropriate at this time, attempts at differential diagnosis may still be valuable. (p. 396)

Gillespie, Miller, and Fielder (1975) examined the nature of legislation at the state level dealing with definitions of learning disabilities. They reported that a wide range of differences exist among state laws regarding what constitutes a learning disability. A child displaying specific behavioral characteristics could be eligible for learning disabilities programs in some states but not in others. In all but two states the child must fit the specific description of learning disabilities if he/she is to receive special services provided by state monies.

A second national survey conducted by Mercer, Forgnone, and Wolking (1976) found that 25 states had revised their definitions of learning disabilities between 1973 and 1975. It was reported that several states were attempting to operationalize the definitions of LD by the examination of functional relationships between behavior and environmental conditions. However, there still remained a broad range of definitions that were characterized by contradictory terms from one state to another.

In summary, with regard to differential diagnosis for learning disabled children, it is often difficult, if not impossible, to determine exactly to which category a child should be assigned, or if he should be assigned to one at all (Lilly, 1977).

Emotionally Handicapped

Definitions of the emotionally handicapped category are no clearer or more standardized than definitions of learning disabilities (Hallahan & Kauffman, 1977). There are many factors which make an acceptable definition of emotional handicaps difficult to formulate. These include an abundance of theoretical models available, the varieties of professional training experiences, the range of professional situations in which one may find children with emotional handicaps, and problems associated with the assessment of these handicaps (Achenbach, 1974; Kauffman, 1977). Although similar problems face professionals in defining other categories of exceptionality, emotional handicaps are especially difficult to define because of excessive, deficient, and inappropriate patterns of behavior that deviate from normal. A great variety of deviant behaviors are classified in this category.

Shultz, Hirshoren, Manton, and Henderson (1971) surveyed state provisions for emotionally handicapped students. Their report showed that there was little consensus among states as to a single definition for the population served. Academic and behavior adjustment problems were the most frequent components of state definitions.

Epstein, Cullinan, and Sabatino (1977) updated the information on state definitions of emotional handicaps. From their survey of special education programs in all 50 states a definition of emotional handicaps was presented. This definition had 11 components. These components included: (1) disorders of emotion/behavior, (2) interpersonal problems, (3) learning achievement problems, (4) deviation from behavioral norm, (5) chronicity of problems, (6) specific causal phenomena (i.e., family breakdown), (7) prognosis for improvement, (8) exclusions (i.e., no sensory or physical impairments), (9) special class placement required, (10) eligibility for services was certified, and (11) severity of problem. The state definitions were all criticized on several points. They were stated ambiguously in most cases. The number of components varied greatly from state to state, and on several points, one state's definition directly contradicted another's (Epstein et al., 1977). When the meaning of emotional handicaps in children is sifted out of the definitions, it appears that a child is disturbed when an adult authority figure says he is (Hallahan & Kauffman, 1977).

Behavioral Characteristics of the Mildly Handicapped

Phillips, Draguns, and Bartlett (1975) state that there is a "need for a classification of behaviors and not of personality, of disorders and of individuals" (p. 43). To adequately evaluate specific observable classroom behaviors across all these categories

of exceptionality, those behaviors must be representative of each group as determined by traditional diagnostic schemes.

Behavior problems exhibited by the educable mentally retarded student have been documented. EMR students exhibit behavior problems more frequently than do normal populations (Garfield, 1963). Rutter and Hemming (1970) found that educable mentally retarded children were more fearful, miserable, irritable, and fidgety than their normal peers. Also exhibited by the group studied was a higher rate of aggressiveness and lower rate of concentration abilities.

Baroff (1974) reports that the educable child manifests various kinds of behavior disorders. Some of the more common behavior problems of EMR children are: low frustration tolerance, hyperactivity, aggression, and general problems of motivation. These behaviors often occur in the classroom setting and may be measured by direct observational procedures.

The learning disabled student also exhibits behavioral problems in the classroom to a greater extent than the normal child (Bryan, 1974b; Lerner, 1976). Learning disabled children with behavioral disorders may be hyperactive, explosive, erratic, or otherwise uninhibited in behavior. Tarver and Hallahan (1976) and Lovitt (1978) listed the most often cited characteristics of the learning disabled child. Included in this list were: hyperactivity, emotional lability, disorders of attention, and impulsivity. All of these characteristics tend to pose behavior management problems for the classroom teacher.

Finally, the emotionally handicapped child, by categorical definition, displays behavioral excesses and deficiencies in the classroom. Kauffman (1977) categorizes the behavioral characteristics of EH children into seven behavior syndromes. These syndromes include: hyperactivity, distractability, impulsivity, aggression, withdrawal, inadequacy, and immaturity. These syndromes are an attempt to classify behaviors and not personality as Phillips et al. (1975) recommend.

By virtue of the behavior problems exhibited by all three categories of exceptionality of interest in this study, operational definitions for specific classroom behaviors were designed to assess frequencies of task oriented and non-task oriented behaviors (see Appendix A). The behaviors defined by Becker et al. (1967) and Walker et al. (1971) are mutually exclusive of the range of possible behaviors to be exhibited by exceptional students in the study.

Overlap of Behavioral Characteristics

In order to group children in a functional way, a child's performance on a specified educational task must be measured precisely and continuously. Hallahan and Kauffman (1977) suggested that children be considered candidates for special education on the basis of specific social or academic performance deficits, and not solely on the basis of standardized test scores or clinical impressions. Educable mentally retarded, emotionally handic. ped, and learning disabled have a great deal in common. It is nearly impossible to

separate them into the traditional categorical groupings based on performance in the classroom (Hallahan & Kauffman, 1976, 1977; Kauffman, 1977).

Common behavioral characteristics among traditional groupings of exceptional students may or may not be the result of common etiologies (Gardner, 1977). O'Grady (1974) found that children labeled as learning disabled and others labeled as "emotionally handicapped" exhibited similar patterns of language difficulties. Bryan and Bryan (1975) described the emotional disturbance features of learning disabled children. Neisworth and Greer (1975) described the functional similarities of learning disability and educable mental retardation. No exceptional learning or behavior characteristic is categorically or inherently inappropriate or inadequate (Gardner, 1977).

Personality and social adjustment, IQ and underachievement were examined by Hallahan and Kauffman (1976, 1977) in relationship to the behavioral overlap that accompanies these factors for each of the three diagnostic categories. They conclude that no specific distinction could be made between the groups on all four dimensions. However, it must be pointed out that empirical research was not the basis for their decisions.

Personality and social adjustment are usually used to define a child as emotionally handicapped. Balthazar and Stevens (1975) report that mildly retarded individuals frequently exhibit problems of personal adjustment. This overlap in behavioral characteristics

between emotionally handicapped and mildly retarded students is strengthened when the AAMD definition of mental retardation is considered. A major component of that definition is deficiency in adaptive behavior. It is logical to assume that personality and social adjustment are synonomous with adaptive behavior (Hallahan & Kauffman, 1977). Zigler (1975) reported that cognitive deficits in retarded individuals was due to personality variables.

Connolly (1975) and Rubin (1971) have stated that LD children have problems in personal adjustment. McGhee and Crandall (1968) support this contention with empirical research that shows that LD children are likely to have adjustment problems. In addition, Rubin (1971) and Kauffman (1977) presented evidence showing that emotionally handicapped children have a high incidence of cognitive deficits. Therefore, Hallahan and Kauffman (1977) assume that mildly mentally retarded, emotionally handicapped, and learning disabled children all are likely to exhibit personality and social adjustment problems.

By definition, mentally retarded children have lower IQ's than do EH or LD children. Kauffman (1977) has shown that the distribution of intelligence for both the EH and LD child is below the mean for the total population. Although the lower IQs do not fall in the MR range for the EH and LD children it is argued that the teacher would be wise to approach them with the same educational strategy (Hallahan & Kauffman, 1976, 1977).

Underachievement is often used to describe a child as learning disabled. Dunn (1973), Graubbard (1973), and Kauffman (1977) reviewed the research and stated that many mildly retarded and emotionally handicapped children are also underachievers.

These three areas have a great deal in common (Forness & Langdon, 1974; Forness, 1976; Hallahan & Kauffman, 1976, 1977; Taylor et al., 1972). To achieve success, a special education teacher of any one of the three categories is not likely to approach the children differently than a teacher in any one of the other two areas. Additional research is needed to determine the degree to which the three diagnostic categories differ on more finely defined behavioral characteristics.

Some research evidence does exist that shows there may be differences among EMR, EH, and Ld students. Hallahan (1975) and Tarver, Hallahan, Kuaffman, and Ball (1976) found evidence that suggests that LD children have a greater attention deficit than do EMR children. However, the authors criticized their data because of the criteria used to select LD children in the studies was too broad. Becker (1978) compared mild and moderately learning disabled children to educable mentally retarded children on individual tasks of conceptual abilities and learning styles. Results suggested that differences between the learning disabled groups and the educable mentally retarded groups indicated differences in problem solving abilities for each group.

Summary

Definitions of categories of exceptionalities are difficult to pinpoint, yet they are required for the present service delivery models set up by state and local education agencies. Implications of definitions include three components. First, prevailing definitions help shape legislative, administrative, and advocacy group decisions related to the education of each diagnostic category of exceptional child. Second, definitions are the basis for estimates of prevalence. Prevalence figures largely determine who will receive certain services. Finally, definitions are necessary for the continuing research effort to understand each exceptional child.

An alternative system for providing services is described in the next section. Heavy reliance on categories, labels, and definitions may not be necessary.

The Noncategorical Movement

Special education is undergoing a transformation in the use of categorical labels. As a response to the (1) debilitating effects of labeling and (2) the imprecise definitions of mildly handicapped students there is a shift away from traditional labels with specifically defined and mutually exclusive categories (Forness & Langdon, 1974). This trend has serious implications for the way children are taught in school settings. There have been successful attempts to group mildly retarded, emotionally handicapped, and

learning disabled students together in the same classrooms (Taylor, Artuso, Soloway, Hewett, Quay, & Stillwell, 1972). Teachers in these classrooms have been prepared to deal with a wide range of learning and behavior problems.

The widespread use of behavior modification as an approach to educational problems has contributed to the present trend away from categorical labels. Behavior modification minimizes use of labels and focuses on individual student performance (Forness, 1976; Forness & Langdon, 1974). There is a trend toward substituting new categories which are referenced to behavioral goals and educational needs.

Forness and Langdon (1974) in their discussion of the recent deemphasis in categorical labeling have stated the trends as follows:

> Ways must be found to reconceptualize not only the way such children are grouped but the very ways in which professionals think about them. The traditional labeling stimuli associated with what a child is must be dropped, and he must be perceived in relation to what he needs in order to achieve his optimum school progress. (p. 447)

The professional should be concerned with the operationally defined requirements of meeting specific educational needs rather than matching children to definitions (Gillespie, Miller, & Fielder, 1975). Identifying discrete categories of children should not be the prerequisite for providing services. Instead, the prerequisite should concentrate on establishing processes for determining individual educational plans based upon information obtained from observable behaviors that indicate learning problems and

environmental variables. In essence, these authors state that programming, not placement, should be stressed to meet each child's educational needs regardless of traditional diagnostic category.

Therefore, the noncategorical approach places more importance on teaching. Sorting learners into the categories of educable mentally retarded, emotionally handicapped, and learning disabled does not provide any additional input for educational programming (Gillespie et al., 1975). (See Appendix B for a discussion of generic services for exceptional children.)

In summary, the noncategorical movement combines the three traditional diagnostic categories of educable mentally retarded, emotionally handicapped, and learning disabled students into one broad generic category. It has been argued in the literature that because of similarities in educational behavioral performance these groups should be classified together under one heading. Approaches to teaching these students may be similar. Further research is needed to determine the effectiveness of the noncategorical approach.

Summary of Related Literature

Researchers and educators who have examined (a) the effects of labeling exceptional children, (b) the definitions of categories of exceptionalities, and (c) noncategorical approaches to the education of exceptional children have stated that there are numerous questions that still require investigation before any conclusive evidence can be proposed for more effective educational programs. In order for educators to be able to design more effective programs

using a noncategorical approach, information regarding the relationship of the characteristics of mildly retarded, emotionally handicapped, and learning disabled children will require answers. Through investigation, comparison, and through direct observation of specific behavioral characteristics of these three exceptionalities it may be possible to provide empirical support for noncategorical educational programs based on individual educational needs rather than groupings by category.

CHAPTER III

METHODS

To test the hypothesis of no significant differences of behavioral characteristics among educable mentally retarded, emotionally handicapped, and learning disabled students a non-experimental procedure was used. A field study approach (Kerlinger, 1973) utilizing direct observations of each student examined the behavioral characteristics presented by each student from each diagnostic category in two educational settings: (1) the regular classroom and (2) the special education resource room.

Direct observation of operationally defined non-task oriented and task oriented classroom behaviors yielded frequency counts that were subject to data analysis. The frequencies of the behaviors counted produced means that were compared using a visual graphic representation and a two way analysis of variance repeated measures procedure.

Setting

Observation of subjects for this study took place in two educational settings in the Hillsborough County Public Schools, Tampa, Florida. Each subject was observed six times; three times

in the regular classroom and three times in the special education resource room.

The regular classroom was defined as any academic class that the subject had attended for at least six weeks prior to the observation procedure. Included in this setting were classes in language arts, English, social studies, science, and mathematics. The resource room was defined as a special education classroom to which students were assigned for one or more 45 minute periods per day (not exceeding three 45 minute periods per day for the purpose of this study). In the resource room the special education student (i.e., EMR, EH, LD) received special remedial or tutorial instruction in specific academic skills and/or social interaction similar to the procedures discussed by Hammill and Bartell (1978) in their text Teaching Children with Learning and Behavior Problems.

Subjects

In this investigation 60 subjects were required. All subjects were randomly selected from a population of 11-12 year old exceptional children and 11-12 year old non-handicapped children. Specifically, 15 students from the educable mentally retarded, emotionally handicapped, and learning disabled diagnostic categories were selected for observation (n=45).

Student records were examined to obtain the chronological ages, achievement levels, and intelligence quotients for the handicapped students (see Appendix C for a compilation of this data). The mean ages for the three groups of exceptional children were calculated:

(1) educable mentally retarded ($\bar{X}$ = 10.6), (2) emotionally handicapped ($\bar{X}$ = 11.9), and (3) learning disabled ($\bar{X}$ = 11.2).

Wide Range Achievement Scores were also obtained for measures of reading, spelling, and math achievement. Means were calculated for each group of exceptionality: (1) educable mentally retarded; reading ($\bar{X}$ = 1,2), spelling ($\bar{X}$ = 1.3), and arithmetic ($\bar{X}$ = 1.1); (2) emotionally handicapped; reading ($\bar{X}$ = 3.2); spelling ($\bar{X}$ = 2.6); and arithmetic ($\bar{X}$ = 3.3); and (3) learning disabled; reading ($\bar{X}$ = 2.7); spelling ($\bar{X}$ = 2.3); and arithmetic ($\bar{X}$ = 3.8). Finally, full scale intelligence quotients were obtained from the results of the Wechsler Intelligence Scale for Children. Mean scores for each group of exceptionality were: (1) educable mentally retarded ($\bar{X}$ = 60.0), (2) emotionally handicapped ($\bar{X}$ = 85.5), and (3) learning disabled ($\bar{X}$ = 92.1).

Fifteen non handicapped children were randomly selected from the population of regular fifth grade classes in the 18 elementary schools that had been selected for the study. These students served as a control group. The control group was used to examine the ability of the behavior checklist to discriminate differences in behavior between the exceptional and non-handicapped children.

To control for experimental mortality a pool of subjects was developed so that in the event of subjects being unable to complete the study, a replacement subject could be randomly selected from the pool. To control for the prospect of including subjects with transient situational disorders each teacher was interviewed to

determine whether any subjects were exhibiting such problems. If subjects were undergoing transient adjustment problems they were excluded from the investigation.

The age range of the sample was restricted to attempt to minimize the variability of observed behavior often characterized by children at different ages. Equally, it is likely that 11-12 year olds will be in the same grade in school (i.e., fifth grade). Therefore, it was anticipated that these procedures would yield a more homogeneous sample than selection of subjects from the whole elementary school population.

Each subject selected had been certified by a school psychologist or psychiatrist as either educable mentally retarded, emotionally handicapped, or learning disabled according to district and state guidelines for categorical placement in special education programs (Florida Department of Education, 1976, 1977) (see Appendix D). Also, subjects were not identified by name for the purposes of the study. Each student received an identification number and remained anonymous. (See Appendix E for Informed Consent procedures.)

Instrumentation

The behavior counting checklist directed observers to count non-task oriented or task oriented classroom behaviors defined in operational terms (see Appendix F). A behavior observation

format was provided and required that each observer mark occurrences of behavior in appropriate spaces provided for each designated classroom behavior (see Appendix A). Non-task oriented behaviors were defined as non-productive behavior and/or activity not assigned by the teacher at the time of observation. Task oriented behaviors were defined as appropriate responses to teacher directed activities at the time of the observation.

Data Collection

A videotaped instructional procedure was used to train observers for the field study (see Appendix G). The observers were three advanced special education graduate students from the University of South Florida's Gifted Education Program. Each observer was unaware of the diagnostic category of the subjects. The observers counted behaviors displayed by the subjects in six 20-minute time periods; three periods in the regular class, three periods in the resource room. Observers counted non-task oriented and task oriented behaviors at 15-second intervals for each observation period. A total of 60 minutes of observation time in each classroom setting yielded frequencies of non-task oriented and task oriented behaviors (see Appendix F for Behavior Observation Format).

A second observer joined the first for one observation period to establish a criterion reference for the calculation of a coefficient of observer agreement (Medley & Mitzel, 1963). A reliability coefficient was also computed by employing the within subjects term from an analysis of variance procedure (Myers, 1972). This coefficient defined the accuracy of the observational procedure.

The data for all procedures were recorded in terms of frequency of occurrence of non-task oriented behaviors defined by the behavior checklist. The frequency of behavior per observation was represented as a total score for each component of non-task oriented and task oriented behaviors for each classification of exceptionality for each classroom setting. The eight components of non-task oriented behavior were summed as the dependent measure. The two components of task oriented behavior were also summed as an additional dependent variable.

Data Analysis

The data obtained from the observational procedure were analyzed by using two separate techniques. These techniques (1) individual graphic visual representation and (2) inferential statistical procedures, provided a thorough examination of all data obtained.

Graphic Visual Representation

Data were summarized by transforming the numerical frequencies from each observational session into a single data point. For each subject six data points were generated; three for resource room observations and three for regular classroom observations. A loss of information was expected in this process but poses no dangers providing (a) that which is lost is redundant with that which is retained, (b) no information of value was inadvertently or mechanically discarded, and (c) new information of an artificial nature was not created (Johnston & Pennypacker, in press). A pilot study (Sherry & Algozzine, 1978) has confirmed the ability of the data to retain pertinent information.

To detect relations in the data or between the data and the independent variables of categories of exceptionality information was displayed in the form of tables and graphs. Tables and graphs were generated for each exceptionality. Relationships were manifested by the spatial relationships of the components of the graphical display. These components included the mean frequencies for non-task oriented behaviors for all three groups of exceptional children per observation period in the regular class and resource room settings. An equal-interval chart of the mean scores of frequencies of the operationally defined non-task oriented behaviors was used.

Statistical Procedures

The data were analyzed by employing a 2 x 3 factorial analysis of variance repeated measures design (ANOVR) (Games, Gray, Herron, & Pitz, 1974) (see Appendix H). Cochran's C statistic is used to test for the assumption of homogeniety of error variance (Kirk, 1968). Also, because of the nature of the data obtained (i.e., frequency data) a square root transformation was used to (a) achieve homogeniety of error variance, (b) achieve normality of treatment level distributions, or (c) to obtain additivity of treatment effects (Kirk, 1968).

The means, standard deviations, and analysis of variance for the frequency of non-task oriented behavior for each group are presented in a summary table. Because of the descriptive nature of the field study the most pertinent information obtained by the analysis of data is the cell mean. Use of an overall omnibus test yielded additional information concerning (a) frequencies of non-task oriented behaviors and the relationship for EMR, EH, and LD categories, (b) whether there is a difference in behaviors dependent upon resource room or regular class placement and category of exceptionality, and (c) whether there is an interaction between class placement and category of exceptionality. Tukey's HSD procedure is used as a posteriori follow up examination of the results (Kirk, 1968).

Summary

Sixty subjects (each group n=15) were randomly selected from 92 elementary schools within the Hillsborough County Public School system. Students from three diagnostic categories of exceptionality were used. In addition, a control group of non-handicapped students was employed to test the ability of the behavior checklist to discriminate differences between exceptional students and non-handicapped children.

A videotaped instructional presentation was prepared and utilized to train advanced special education graduate student observers. Each of three advanced graduate student observers from the University of South Florida used the behavior counting checklist in 30 observational settings each. An additional observer joined each of the three observers to provide a criterion reference to establish a coefficient of observer agreement. The accuracy of the observational technique was estimated by calculating a reliability coefficient employing an analysis of variance procedure.

CHAPTER IV

RESULTS, DISCUSSION, AND LIMITATIONS

This chapter contains (1) the results of the statistical analyses of the data obtained in this investigation, (2) graphic representation of frequency data, (3) reliability measures, (4) a brief discussion of results, and (5) the limitations of the study.

The purpose of this investigation was to determine whether exceptional children differ in behavioral characteristics when observed in the regular classroom or special education resource room. Observational data of the behavior of educable mentally retarded (EMR), emotionally handicapped (EH), and learning disabled (LD) children (N=15) were recorded as frequencies of occurrence on a behavior rating checklist. Each student's frequency of non-task oriented and task oriented behavior was tallied during six observation periods; three in the regular class and three in the special education resource room.

The raw frequency data were summed for each student observed to obtain a mean score for each child for each classroom setting. These means were analyzed by employing a two-way analysis of

variance repeated measures design. The category of exceptionality (i.e., EMR, EH, LD) represented the between subjects factors. Classroom setting (i.e., regular class or special education resource room) represented the within subjects factors. The category of exceptionality and the classroom setting were independent variables. The mean frequency of non-task oriented behavior and task oriented behavior represented the dependent variables. Two analyses were completed to test for differences in the mean frequencies of behavior for (1) non-task oriented behavior in the regular class, (2) non-task oriented behavior in the resource room, (3) task oriented behavior in the regular class, and (4) task oriented behavior in the resource room.

Since it was necessary to determine whether the behavior checklist discriminated exceptional students from non-handicapped students two additional analyses were undertaken. A control group (N=15) of non-handicapped children was compared to each group of exceptional children using a one-way analysis of variance procedure for each dependent variable.

Analysis of Variance

All analyses were obtained using the Analysis of Variance Repeated Measures (ANOVR) computer program developed by Games, Gray, Herron, and Pitz (1974). Two critical assumptions are required for the effects of the repeated measures design to be distributed as F-ratios. One of these is that the variance-covariance matrix of the within subjects factors be compound and

symmetric; that is, it should have homogeneous variance and constant covariances. The ANOVR program tests for this property automatically.

A second critical assumption is that the population lambda be equal to 1.0. This property designates that the combinations of variance and covariances for the within subjects factors are constant and therefore permits pooling of the variance estimates into a common error term. ANOVR provides a test of this condition also.

The basic assumptions of normality, homogeneity of variance, and additivity were tested by performing a square root transformation (Kirk, 1968). The square root transformation was chosen because the dependent variables resulted in frequency counts. Examination of the transformation yielded results similar to the ANOVR. In addition, Bartlett's test for homogeneity of variance (Kirk, 1968) yielded a chi square of 4.56 with degrees of freedom equal to 2 ($p > .05$).

ANOVR Results

The means, standard deviations, and analysis of variance summary table for the frequencies of non-task oriented behavior are presented in Table 1. Analysis of results indicated significant differences between the frequencies of non-task oriented behavior for the exceptionality of student ($F(2,42) = 4.77$) and

Table 1

Means, Standard Deviations, and Analysis of Variance Summary Table for Frequencies of Non-Task Oriented Behavior for EMR, EH, and LD Students in Regular Class and Special Education Resource Room Settings

Exceptionality	Classroom Setting	Mean	Standard Deviation
EMR	Regular Class	61.13	28.27
	Resource Room	55.93	65.71
EH	Regular Class	84.73	45.06
	Resource Room	41.20	22.81
LD	Regular Class	129.53	61.87
	Resource Room	67.87	56.09

n = 45

Source	df	MS	F
Between Subjects			
Exceptionality	2	14549.43	4.77*
Error	42	3048.35	
Within Subjects			
Setting	1	50470.40	16.73*
Exceptionality by Setting	2	6233.43	3.42*
Error	42	1821.68	

*$p < .05$

within subjects by classroom setting ($F(1,42) = 16.73$). Also, a significant difference was indicated for the interaction of exceptionality of the child by classroom setting ($F(2,42) = 3.42$).

To test the significant interaction effect Tukey's HSD posteriori multiple comparison test was applied to determine pairwise comparisons among means (Kirk, 1968). Since both main effects were involved in the interaction, only the "simple effects" were analyzed further. Assumptions underlying the use of pooled variance estimates for the tests (i.e., homogeneous variance-covariance matrices across between-subject factors) were violated; therefore, all subsequent t-tests were computed utilizing individual and co-variance estimates for error terms as appropriate for each comparison. For between subjects analysis the critical value of Tukey's HSD procedure equaled 2.50 ($p > .05$). For within subjects measures Tukey's HSD yielded a critical value of 2.14 ($p > .05$). Represented in Table 2 are the differences among mean frequencies of non-task oriented behavior for each exceptional child category for each classroom setting. An examination of these results indicates that five pairwise comparisons exceeded the critical HSD values and are significant at the .05 level.

These results are represented in Table 3 using Duncan's procedure. Tukey's HSD procedure yielded a significant difference between the means of (1) learning disabled children in the regular classroom ($\bar{X} = 129.53$) differed significantly from all other groups, and (2) emotionally handicapped students in the resource room

Table 2

Differences Among Means of Frequencies of Non-Task Oriented Behavior for EH, LD, and EMR Students in Regular Class and Special Education Resource Room Settings

		Emotionally Handicapped		Learning Disabled		Educable Mentally Retarded	
		Regular Class	Resource Room	Regular Class	Resource Room	Regular Class	Resource Room
Emotionally Handicapped	Regular Class	-	4.16*	-2.27	.91	1.72	1.40
	Resource Room		-	5.20*	-1.71	2.15	-.82
Learning Disabled	Regular Class			-	3.42*	3.90*	3.16*
	Resource Room				-	-.41	.55
Educable Mentally Retarded	Regular Class					-	.27
	Resource Room						-

*$p > .05$

Table 3

Summary of Differences Among Means for EMR, LD, and EH Students in the Regular Class and Special Education Resource Room on Non-Task Oriented Behavior

Learning Disabled Regular Class	Emotionally Handicapped Regular Class	Learning Disabled Resource Room	Educable Mentally Retarded Regular Class	Educable Mentally Retarded Resource Room	Emotionally Handicapped Resource Room
129.53	84.73	67.87	61.13	55.93	41.20

($\bar{X}$ = 41.20) differed significantly from the behavior of emotionally handicapped students in the regular classroom setting ($\bar{X}$ = 84.73).

Nonsignificant relationships are shown by the underlined means in Table 3. The learning disabled students in the resource room ($\bar{X}$ = 67.87), educable mentally retarded students in the regular classroom ($\bar{X}$ = 61.13), educable mentally retarded students in the resource room ($\bar{X}$ = 55.73), and emotionally handicapped students in the resource room ($\bar{X}$ = 41.20) did not differ significantly in the mean frequency of non-task oriented behavior displayed. Nonsignificant differences were also indicated when comparing the mean frequency of non-task oriented behavior for emotionally handicapped students in the regular classroom ($\bar{X}$ = 84.73), learning disabled students in the resource room ($\bar{X}$ = 67.87), educable mentally retarded students in the regular classroom ($\bar{X}$ = 61.13), and educable students in the special education resource room ($\bar{X}$ = 55.93).

Overall results of the pairwise comparison suggest that students regardless of exceptionality do not differ in the frequency of non-task oriented behaviors when placed in special education resource room classes. However, each category of exceptional child, when observed in the regular classroom, shows wide variation in the frequency of non-task oriented behaviors. The total mean frequencies for each exceptionality of child for each classroom setting are depicted graphically in Figure 1.

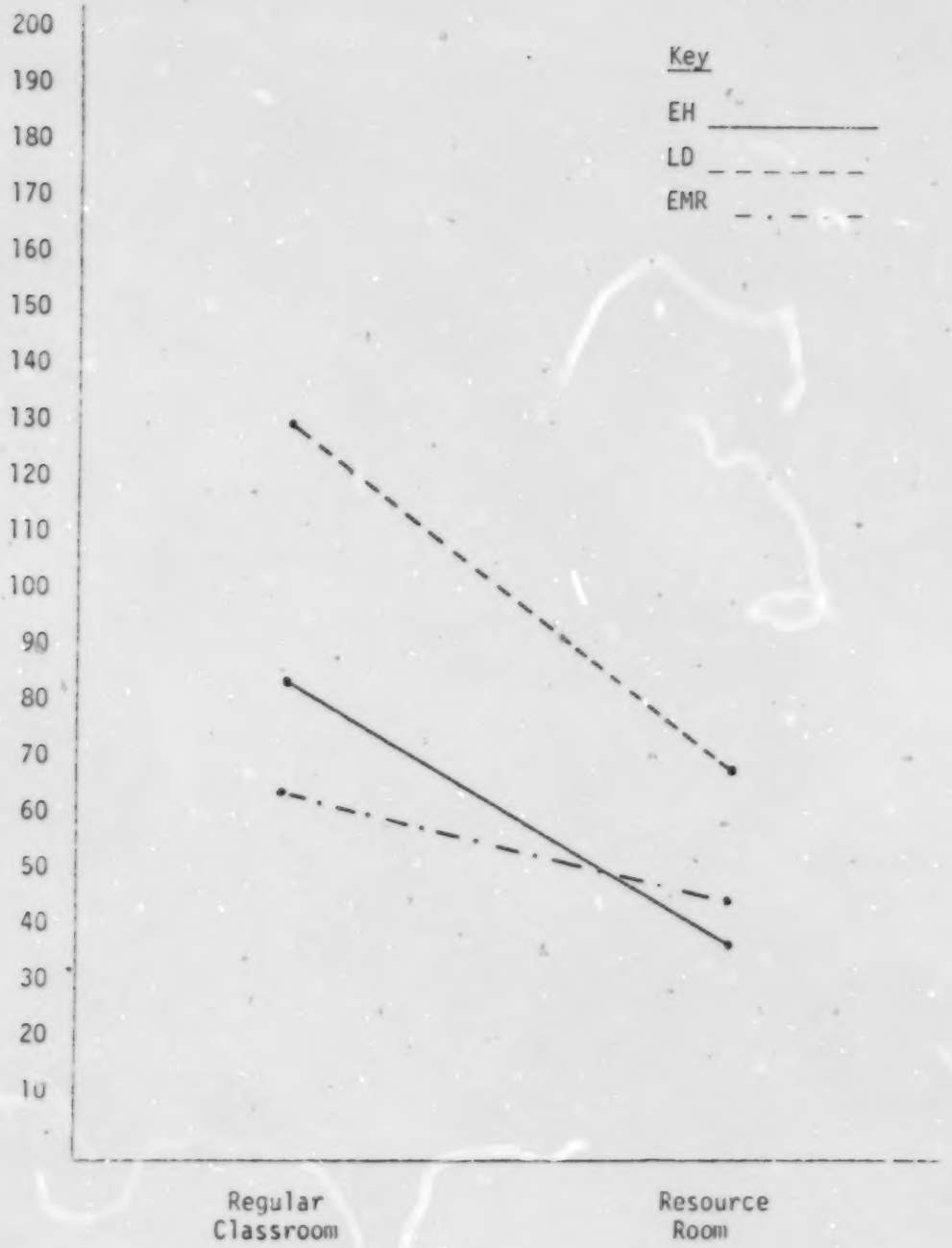

Figure 1

Total Mean Frequencies of Non-Task Oriented Behavior for EH, LD, and EMR Students in the Regular Class and Special Education Resource Room

Figure 1 displays the significant levels of the variation in mean frequencies of exceptional students in the regular classroom. The nonsignificant variations of mean frequencies observed in the special education resource room may also be noted.

The means, standard deviations, and analysis of variance summary table for the frequencies of task oriented behavior are presented in Table 4. Analysis of results indicated significant differences between the frequencies of task oriented behavior for the exceptionality of student ($F(2,42) = 5.63$). Significant differences were also indicated for classroom setting ($F(1,42) = 7.42$). No significant interaction effect was obtained.

To determine the main effects Tukey's HSD multiple comparison test was used to determine pairwise comparisons among mean frequencies (Kirk, 1968). The critical value obtained by employing Tukey's HSD procedure was 2.40 ($p > .05$). An examination of Table 5 indicates that one pairwise comparison exceeded the critical HSD value and is significant at the .05 level.

Table 6 represents the follow-up analysis. Tukey's HSD procedure yielded a significant difference between the mean frequencies of task oriented behavior for educable mentally retarded students ($\bar{X} = 183.27$) and learning disabled children ($\bar{X} = 139.47$). Emotionally handicapped students ($\bar{X} = 176.53$) did not differ significantly from either educable mentally retarded or learning disabled children on the observed task-oriented

Table 4

Means, Standard Deviations, and Analysis of Variance Summary Table for Frequencies of Task Oriented Behavior for EH, LD, and EMR Students in Regular Class and Special Education Resource Room Settings

Exceptionality	Classroom Setting	Mean	Standard Deviation
EH	Regular Class	153.87	49.46
	Resource Room	199.20	22.15
LD	Regular Class	118.73	69.93
	Resource Room	160.20	62.41
EMR	Regular Class	182.27	28.45
	Resource Room	184.27	28.16

n = 45

Source	df	MS	F
Between Subjects			
Exceptionality	2	16688.58	5.63*
Error	42	2964.73	
Within Subjects			
Setting	1	19713.60	7.43*
Exceptionality by Setting	2	4312.93	1.62
Error	42	2655.01	

*$p > .05$

Table 5

Differences Among Means of Frequencies of Task Oriented Behavior for EH, LD, and EMR Students

	Emotionally Handicapped	Learning Disabled	Educable Mentally Retarded
Emotionally Handicapped	-	2.37	-1.15
Learning Disabled		-	-6.66*
Educable Mentally Retarded			-

*p >.05

Table 6

Summary of Differences Among Means for EMR, LD, and EH Students on Task Oriented Behavior

Educable Mentally Retarded	Emotionally Handicapped	Learning Disabled
183.27	176.53	139.47

behaviors. These results suggest that the hypothesis that there are no differences in the task-oriented behavioral characteristics of the three categories of mildly handicapped children observed may be untenable.

Two additional ANOVR analyses were computed to examine the differences between the mean frequencies of behavior for exceptional children and a control group of non-handicapped students. A one-way analysis of variance procedure was used. The means, standard deviations, and analysis of variance summary table for the frequencies of non-task oriented behavior for this comparison is presented in Table 7. Analysis of results showed a significant difference between the frequencies of non-task oriented behavior for the three groups of exceptional children and the non-handicapped group ($F(3,56) = 18.00$).

To test the degree of significance Tukey's HSD procedure was used. Table 8 shows the significant values obtained by using Tukey's test. A critical value of 4.11 ($p > .05$) was exceeded by all pairwise comparisons that included the non-handicapped control group. These results suggest that non-handicapped students were easily discriminated by the behavior checklist format used in this investigation. The mean frequency for non-task oriented behavior for the non-handicapped group is significantly lower than those of the exceptional children.

Table 7

Means, Standard Deviations, and Analysis of Variance Summary Table for Frequencies of Non-Task Oriented Behavior for EH, LD, EMR, and Non-Handicapped Students in the Regular Classroom

Student	Mean	Standard Deviation
EH	84.73	45.06
LD	129.53	61.87
EMR	61.13	28.27
Non-Handicapped	20.07	9.98

n = 60

Source	df	MS	F
Student	3	31367.20	18.60*
Error	56	1686.52	

*$p > .05$

Table 8

Differences Among Means of Frequencies of Non-Task Oriented Behavior for EH, LD, EMR, and Non-Handicapped Students in the Regular Classroom

	Emotionally Handicapped	Learning Disabled	Educable Mentally Retarded	Non-Handicapped
Emotionally Handicapped	-	2.27	1.72	7.70*
Learning Disabled		-	3.90	9.51*
Educable Mentally Retarded			-	7.54*
Non-Handicapped				-

*$p > .05$

Table 9 summarizes these results showing that each group of exceptional child (i.e., EH, LD, EMR) did not differ significantly from each other when compared to non-handicapped students in the regular class. The EMR group ($\bar{X}$ = 61.13), the EH group ($\bar{X}$ = 84.73), and the LD group $\bar{X}$ = 129.53) exhibited higher occurrences of mean frequencies of non-task oriented behavior than the non-handicapped group ($\bar{X}$ = 20.07) in the regular class. The non-handicapped group was significantly lower than the other three groups.

Table 9

Summary of Differences Among Mean Frequencies of Non-Task Oriented Behavior for EH, LD, EMR, and Non-Handicapped Students in the Regular Classroom

Learning Disabled	Emotionally Handicapped	Educable Mentally Retarded	Non-Handicapped
129.53	84.73	61.13	20.07

The final ANOVR analysis compared the mean frequencies of task-oriented behavior for the three groups of exceptional children and the non-handicapped students. Table 10 shows the means, standard deviations, and analysis of variance summary table for this comparison. Analysis of results indicated a significant difference among the groups ($F(3,56) = 19.74$) in the regular classroom.

Table 11 represents the critical values obtained from Tukey's HSD multiple comparison analysis. A critical value of 4.11 ($p > .05$) was obtained. Pairwise comparisons among the mean frequencies of task oriented behavior yielded significant values for each comparison with the non-handicapped group and the groups of exceptional children. Also significant was the comparison between the EMR group and the LD group in the regular class.

Table 10

Means, Standard Deviations, and Analysis of Variance Summary Table for Frequencies of Task Oriented Behavior for EH, LD, EMR, and Non-Handicapped Students in the Regular Classroom

Student	Mean	Standard Deviation
EH	153.87	49.46
LD	118.73	69.93
EMR	182.27	28.45
Non-Handicapped	61.33	9.98

n = 60

Source	df	MS	F
Student	3	40399.31	19.74*
Error	56	2061.30	

*$p > .05$

Table 11

Differences Among Means of Frequencies of Task Oriented Behavior for EH, LD, EMR, and Non-Handicapped Students in the Regular Classroom

	Emotionally Handicapped	Learning Disabled	Educable Mentally Retarded	Non-Handicapped
Emotionally Handicapped		2.37	1.15	10.05*
Learning Disabled		-	6.66*	4.45*
Educable Mentally Retarded			-	21.97*
Non-Handicapped				-

*p >.05

Table 12 summarizes the differences among mean frequencies of task oriented behavior for EMR, EH, LD, and non-handicapped students in the regular class. Non-significant differences were indicated between the means of the EH group ($\bar{X}$ = 153.87) and the LD group ($\bar{X}$ = 118.27). Also, non-significant differences were found between the EMR group ($\bar{X}$ = 182.27) and the EH group ($\bar{X}$ = 153.87). Significant differences were found between the EMR group ($\bar{X}$ = 182.27) and the non-handicapped group ($\bar{X}$ = 61.33). This analysis also shows a significant difference between the mean frequencies of task oriented behavior for the EH and LD groups when compared to the non-handicapped sample. The statistical differences obtained demonstrate that the behavior checklist used by the observers discriminated between handicapped and non-handicapped groups of students.

Table 12

Summary of Differences Among Mean Frequencies of Task Oriented Behavior for EH, LD, EMR, and Non-Handicapped Students in the Regular Class

Educable Mentally Retarded	Emotionally Handicapped	Learning Disabled	Non-Handicapped
182.27	153.87	118.27	61.33

Graphic Visual Representation

To detect relationships in the data between the independent variables of categories of exceptionality several figures are presented. Data included in these figures were generated by transforming the numerical frequencies from each observational session into a single data point. For example, each subject received eight scores on non-task oriented behavior and two scores on task oriented behavior for each observation period. The non-task oriented score consists of the total frequency scores received on the behavior checklist for the following items: (1) gross motor behavior, (2) disruptive noise, (3) aggression, (4) orienting responses, (5) vocal noise, (6) talking, (7) other, and (8) improper position. These eight items when summed provided the total non-task score for each student. The task oriented score consisted of two items: (1) task-oriented independent and (2) task-oriented dependent.

Each student was observed six times; three times in the regular classroom and three times in the special education resource room. The frequency scores for each student were summed to obtain mean scores for the total observation period in each setting. Therefore, a total mean frequency of the eight non-task oriented behaviors made up the total non-task oriented score for the resource room and regular class. The total frequencies for the task oriented scores were computed similarly.

Figure 2 is an equal interval chart of the mean frequencies of the operationally defined categories of non-task oriented behavior for the three groups of exceptional children observed. The mean frequencies plotted on the graph represent averages obtained for three observational sessions in the regular class. A total for the one hour observation period is represented; a comparison of the mean frequencies of non-task oriented behavior in the regular class to those in the special education resource room is also possible (see Figure 3). Direct visual inspection of these two figures reveals that the mean frequencies of non-task oriented behavior (along all eight dimensions of behavior) are generally lower for each exceptional student in the resource room.

Another comparison may be made by displaying all exceptional child categories as total mean frequencies for each dimension of behavior for the regular class and resource room. Figure 4 shows EH, LD, and EMR behaviors averaged across all exceptionalities for non-task oriented behavior. Direct visual comparison yields lower frequencies of non-task oriented behavior for exceptional students when they are in the resource room situation. This graphically confirms results indicated by the ANOVR procedures.

Graphic displays of mean frequencies of task oriented behavior similarly confirm ANOVR analysis results. Figure 5 represents the mean frequencies of task-oriented behaviors (across the two dimensions of operationally defined behavior) for each of

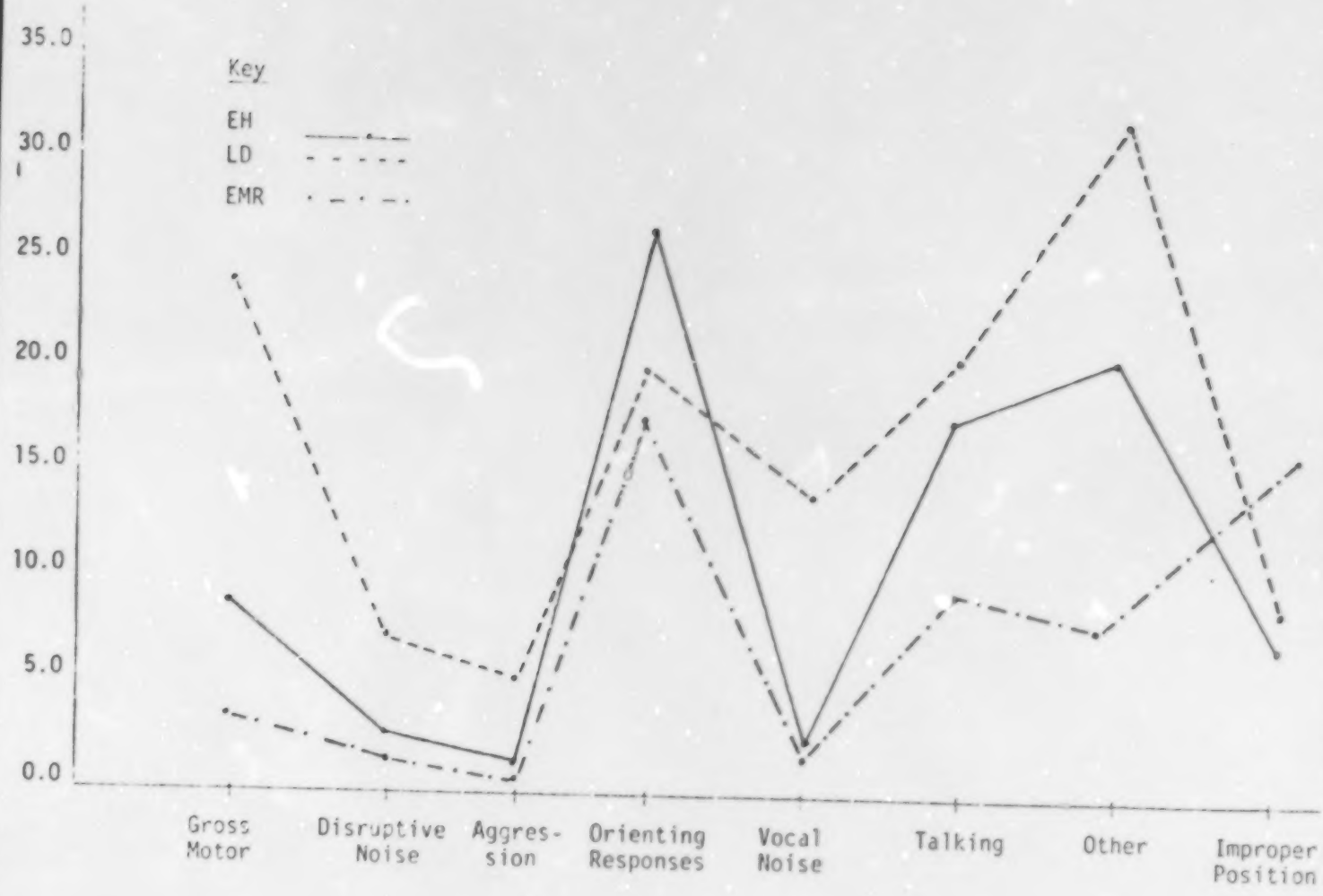

Figure 2

Mean Frequencies of Non-Task Oriented Behaviors for Three Groups of Exceptional Children in the Regular Classroom

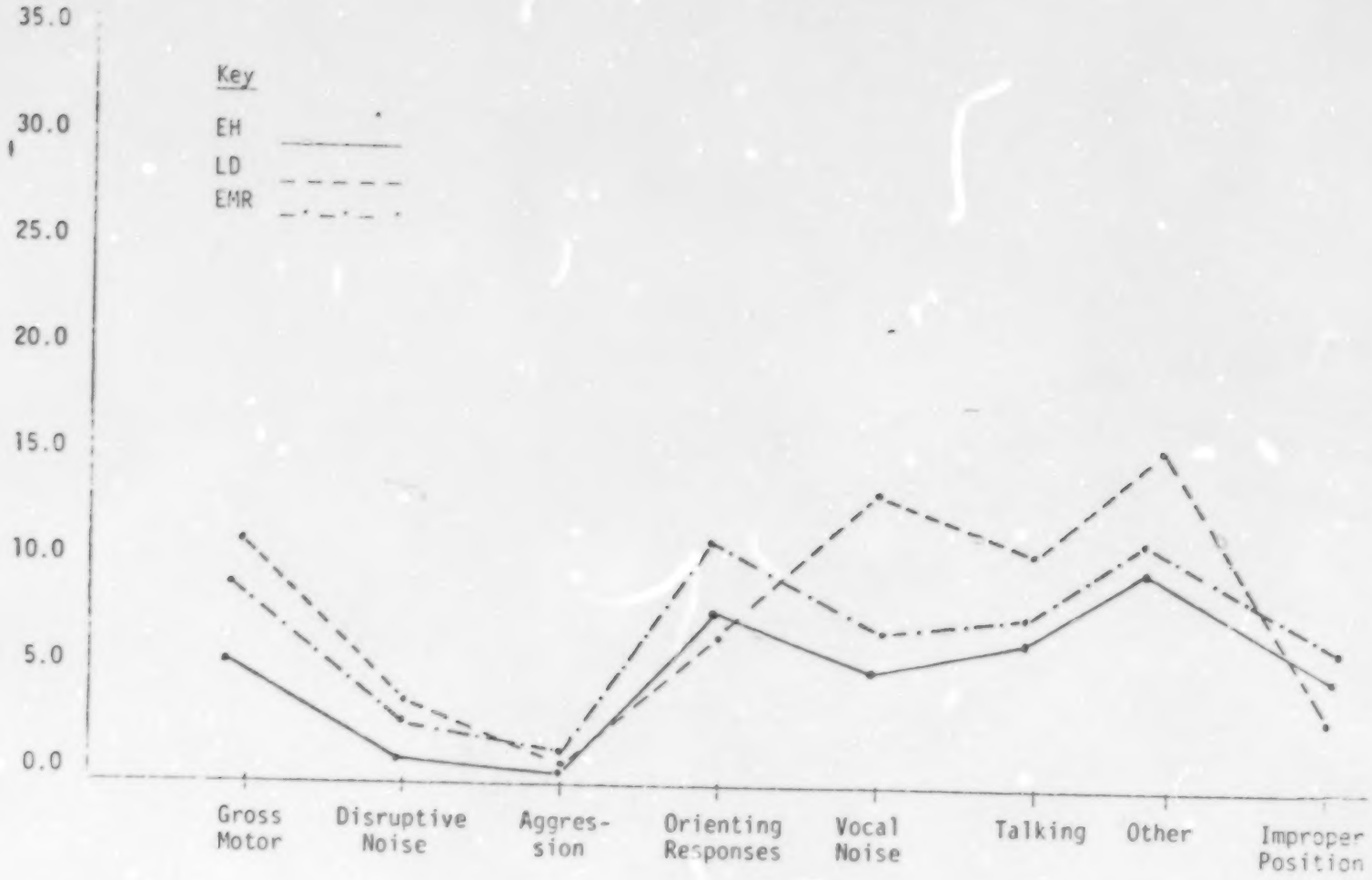

Figure 3

Mean Frequencies of Non-Task Oriented Behavior for Three Groups of Exceptional Children in the Resource Room Class

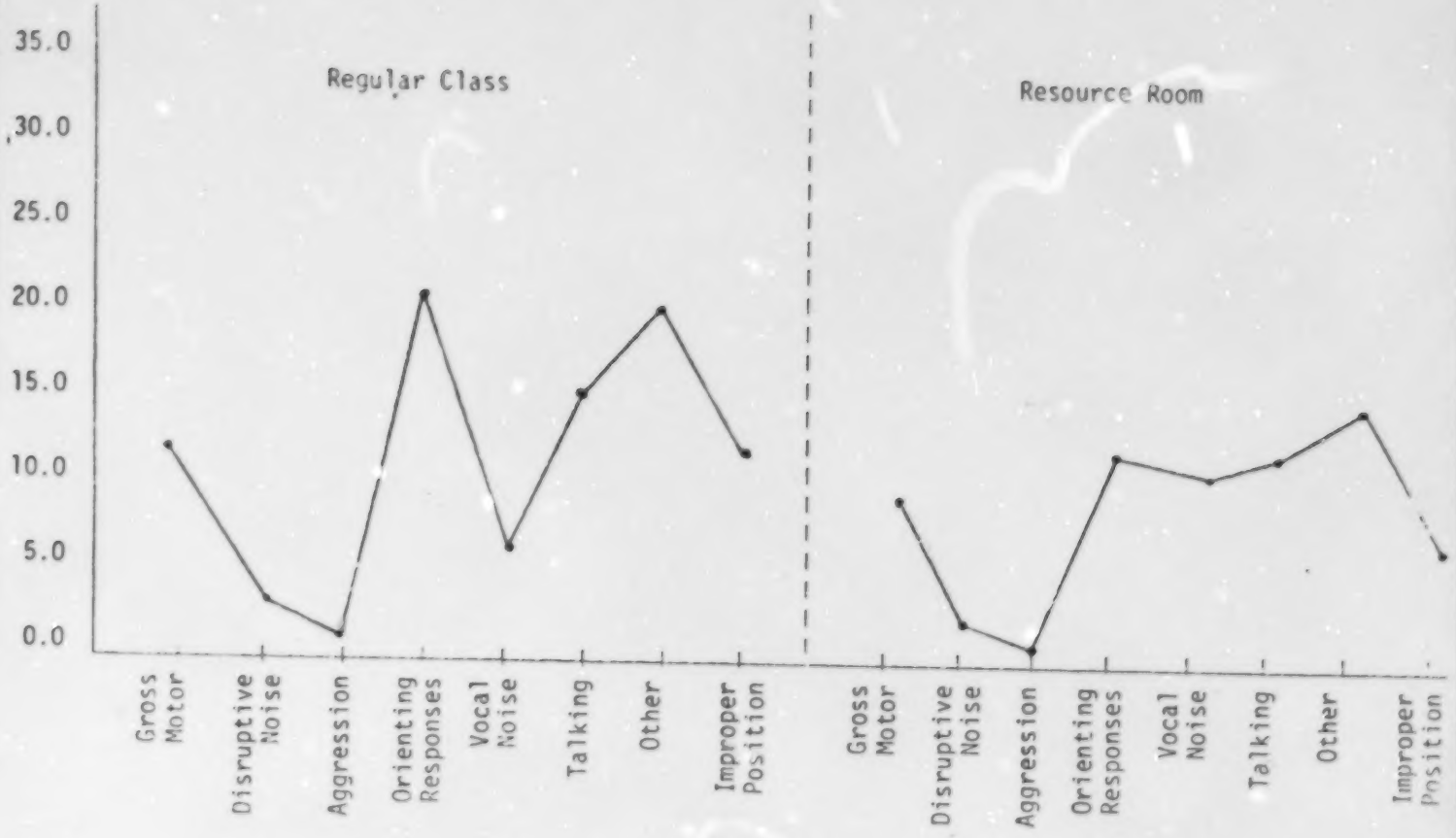

Figure 4

Total Mean Frequencies of Non-Task Oriented Behavior for Exceptional Children in the Regular Classroom and Resource Room Class

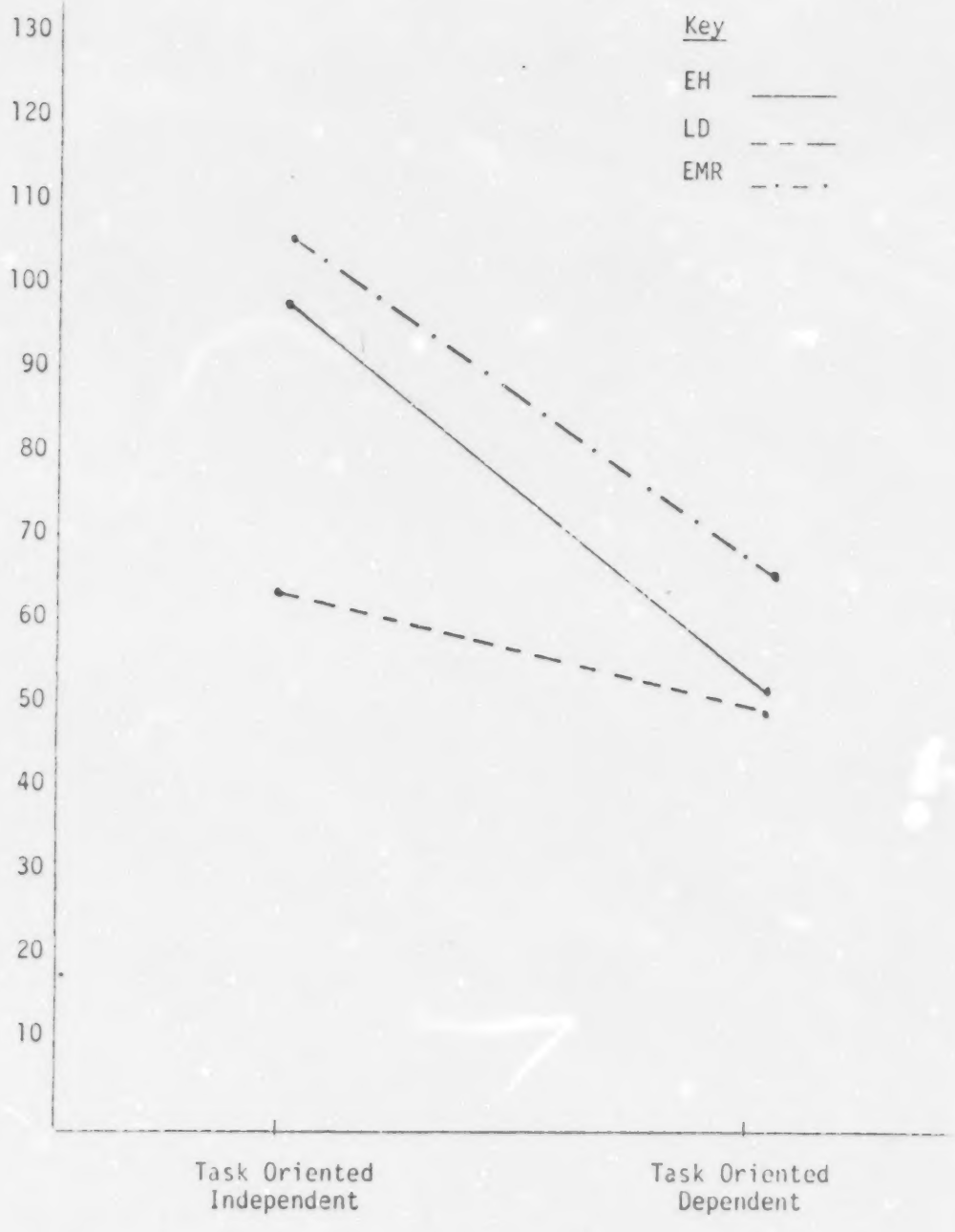

Figure 5

Mean Frequencies of Task Oriented Behavior for Three Groups of Exceptional Children in the Regular Classroom

the three groups of exceptional children observed in the regular classroom. The mean frequencies plotted on Figure 6 show the same behaviors for exceptional children in the resource room setting. Visual comparison suggests a greater frequency of task-oriented behavior in the special education resource room.

When all exceptional child categories are averaged together (see Figure 7) the range of task oriented behavior in the regular class and resource room can be compared. Higher mean frequencies of task oriented behavior are displayed by exceptional students in the resource room. The range of the frequency of behaviors in the resource room is greater but also more task oriented behavior is exhibited by the observed subjects.

These graphic displays of the frequency data obtained provide an effective medium for communicating the relationships found in the data. For this descriptive study, the precise interpretation of the data is essential. The results of observation are immediately comparable for each category of exceptional child for each classroom setting.

Observational Reliabilities

Two types of reliability were calculated on the data obtained from the observational technique used in this investigation. The first type of reliability is the correlation between scores based on observations made by different observers at the same time.

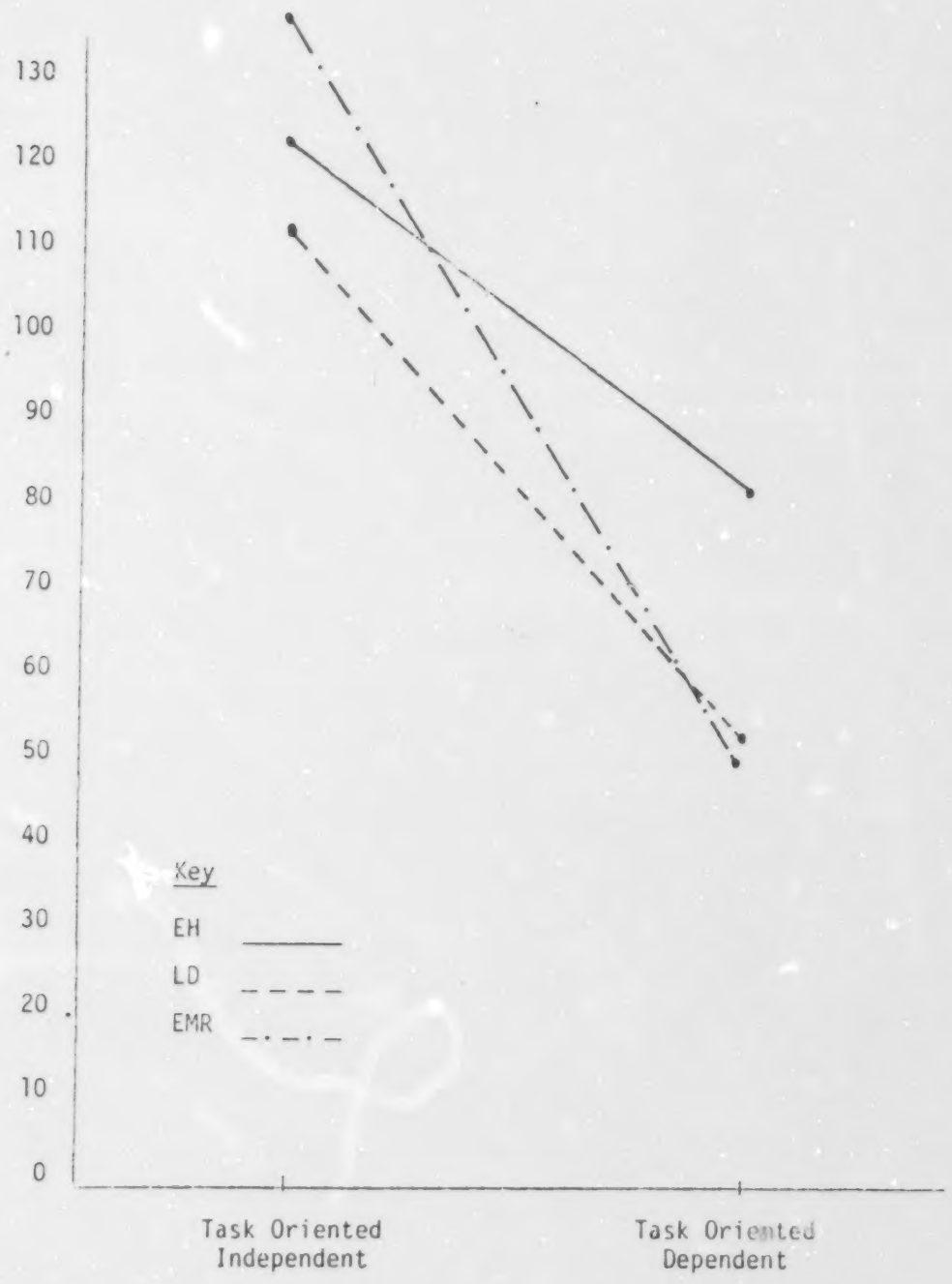

Figure 6

Mean Frequencies of Task-Oriented Behavior for Three Groups of Exceptional Children in the Special Education Resource Room

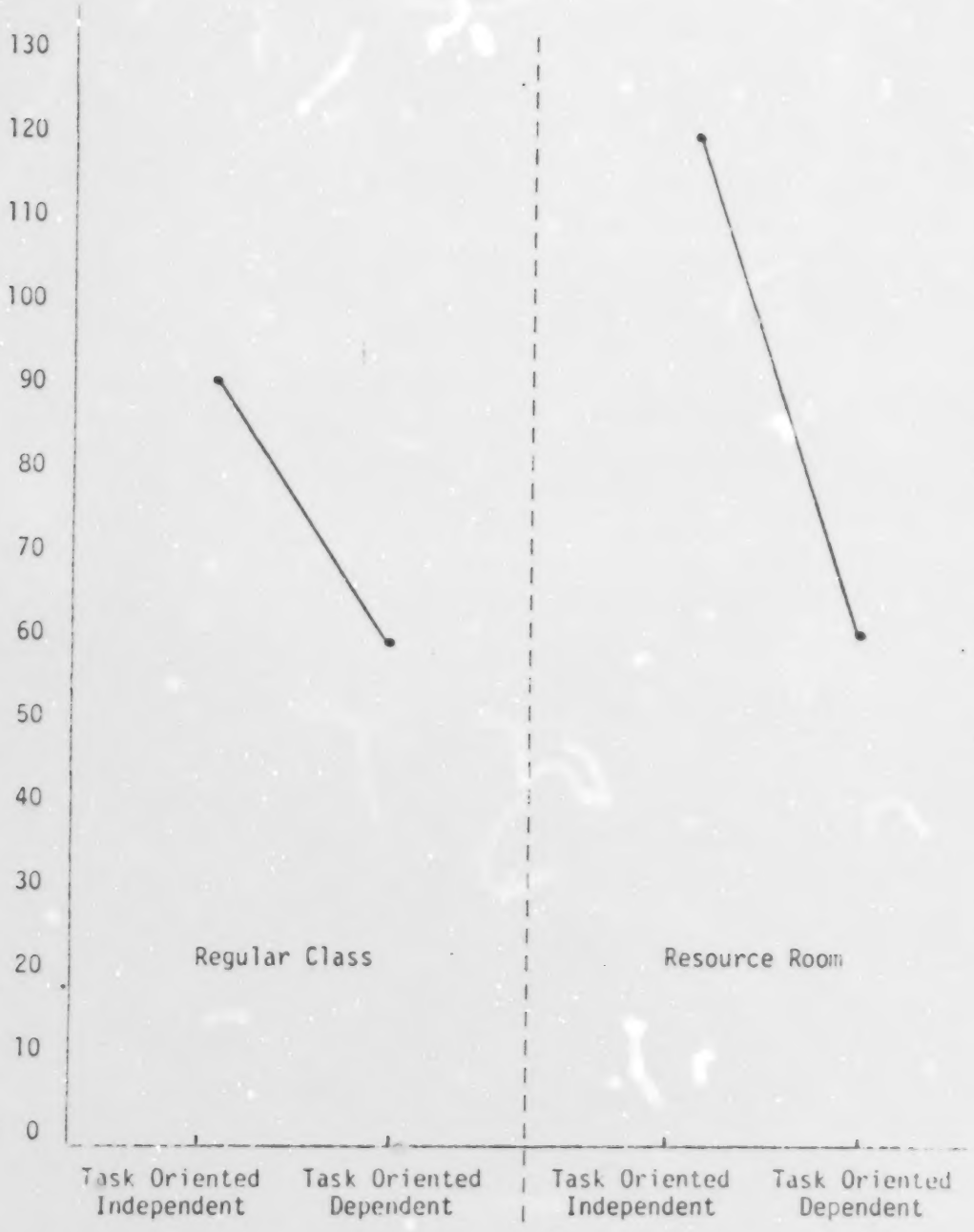

Figure 7

Total Mean Frequencies of Task-Oriented Behavior for Exceptional Children in the Regular Classroom and Special Education Resource Room

The coefficient of observer agreement (Medley & Mitzel, 1963) was based on frequencies obtained from each observer's ratings compared to a criterion rater's observations. In the present study the three observers' ratings yielded coefficients of observer agreement of r = .86, r = .38, and r = .74, respectively.

Because observational researchers argue that a coefficient of observer agreement does not tell how closely an obtained score may be expected to approximate a true score, a reliability coefficient has been caluclated (Medley & Mitzel, 1963). Using an analysis of variance procedure to obtain the reliability coefficient the proportion of total variance attributed to subjects can be measured (Myers, 1972). The reliability coefficient measures the degree to which observers measure the same behavioral traits. More specifically the coefficients are an average of the intercorrelations among the dimensions of behavior when the within-items variance is used to calculate the coefficients.

For the present observational study two separate analysis of variance procedures were completed. The first analysis was used to compute the reliability coefficient for non-task oriented behaviors for the three categories of exceptional students. The reliability coefficient that was computed was r = .65. The second analysis of variance procedure was used to compute the reliability coefficient for task oriented behaviors for the samples of exceptional children. For task oriented behavior the coefficient obtained was r = .64.

The two reliability measures can be distinguished by information they yield concerning the data. The coefficient of observer agreement gives information about the objectivity of the observational technique. The reliability coefficient tells how accurate the measures are in rating the operationally defined behaviors.

Discussion

The purpose of this investigation was to systematically observe the behavioral characteristics of emotionally handicapped, learning disabled, and educable mentally retarded students in the regular classroom and special education resource room. Three trained observers rated 45 special education students in 18 public elementary schools for a total of two hours each; one hour in the regular class and one hour in the resource room. Behaviors were tallied along ten dimensions of operationally defined categories of classroom behavior. These dimensions were grouped into eight non-task oriented categories and two task oriented categories. It was hypothesized that no differences would be observed in the behavioral characteristics of the three groups of exceptional students.

The results indicated that there are differences in the behavioral characteristics of EMR, EH, and LD students when they are observed in the regular classroom setting and rated on

non-task oriented behaviors. More importantly, however, when observed in the special education resource room the same students did not differ significantly in mean frequency of non-task oriented behaviors.

These findings have direct importance to educators who are involved in evaluation and placement activities for mildly handicapped students. Questions arise that relate to the process of labeling a child along categorical lines. Is it possible to appropriately assign labels to a child based on behavioral characteristics as is often done in the initial referral process? Also, when a child is placed in a special education program, is it necessary to program for that child in a categorically labeled classroom (i.e., EMR, EH, LD)?

Results also indicated that the mean frequency of task oriented behaviors increased while the student was in attendance in a special education resource room. Because of the descriptive nature of the investigation it is not possible to establish causal relationships for behavioral patterns of the mildly handicapped students observed. It is possible, however, to suggest that placement in special education classes may foster more appropriate task oriented behavior for exceptional students.

Observational reliabilities calculated showed variation among observers. This variation may have caused error variances to be greater than had the coefficients of observer agreement been higher. Individual differences in observers is desirable and helps to

normally distribute their responses (Medley & Mitzel, 1963). The averaging of the mean frequencies helped to minimize these observer effects. The coefficients of reliability are sufficiently high to determine with some degree of accuracy the reliability of the measures of frequency of behavior.

Limitations

The major limitations of this investigation are apparent when attempting to attribute a causal direction to the obtained results. Because no experimental manipulation was attempted, this study represents primarily descriptive data about the exceptional students.

The 18 elementary schools were randomly selected. From these schools the samples of exceptional children were randomly chosen. Final arrangements to conduct the research were made only after the principal granted permission. Fortunately every principal contacted after random selection agreed to the observational procedure. But at each school site the principals chose teachers and classrooms for the observers to make final scheduling for observation.

Subtle differences in teacher behavior were not examined. Teacher management strategies may have affected the task oriented and non-task oriented responses of the exceptional students in their classrooms. The child's physical location in each classroom

may also have affected the behavioral responses of others and the child under observation.

Finally, the extent to which the presence of an observer influences a child's interaction in the classroom is undetermined. However, the resemblance between a classroom with a single observer present and a classroom with no observer present is closer to real life situations than either a test situation or a laboratory setting (Medley & Mitzel, 1963). Each observer was introduced to the students in the classroom he/she entered. Students were told that the observer would make several visits to the class. After the introduction the observer remained as unobtrusive as possible at the side or rear of the classroom.

In general, these limitations seem tolerable in light of the descriptive nature of the project and the results appear generalizable within the restrictions delimited earlier. Conclusions and implications for future research are discussed in Chapter V.

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter presents a summary of the findings of this investigation. Also included is a discussion of the conclusions and recommendations for future research that may be suggested by the data obtained.

The use of categorical labels in diagnosing, placement, and programming for exceptional children has been the subject of a great deal of debate in the special education literature. Most of the interest has centered around the use of labels and the stigmatizing effects they generate.

Historically, special education tended to conceive of each category of exceptional child as a distinct and separate unit. A child who is mentally retarded has been treated differently than a child with emotional problems or a child with learning disabilities. Each type of child was assigned to separate special classes taught by teachers who were trained to teach one area of exceptionality. This traditional categorical system of classification and placement required specific differential diagnosis. Emphasis was placed on etiology that resulted in unique characteristics for each group.

Recent literature has suggested that it is difficult to make a differential diagnosis among educable mentally retarded (EMR), emotionally handicapped (EH), and learning disabled (LD) students when only the behavioral characteristics of each group are considered. Behaviors of EMR, EH, and LD students are so closely intertwined that accurate differentiation is often impossible (Benda, 1954; Bialer, 1970; Cantor, 1960, 1961; Milgram, 1972). Neisworth and Greer (1975) suggested that diverse causes would produce similar functional problems and that attention to instructional dimensions (i.e., stimulus organization, intensity) was more important than instruction based on categorical handicap. Hallahan and Kauffman (1976, 1977) noted that similarities in etiologies and interventions as well as characteristic behaviors made differential diagnosis of exceptional children difficult and sometimes irrelevant.

The labels applied to exceptional children served specific purposes for the special educator. Gallagher (1976) identified three positive uses of labeling children for special education. The first of these purposes is that labels provide a means for providing a classification, diagnosis, and treatment sequence. This standard use of labeling provides the basis for some type of differentiated treatment. The label placed on a child creates a very different type of treatment program. The earlier in the child's life that this differentiation is made, the more effective the treatment program can become (Bower, 1960; Keogh & Becker, 1973; Martin, 1972). Gallagher (1976) states that if there is

differentiated treatment available and it depends on effective diagnosis and classification then labeling is the first step in a process of effective treatment.

The second purpose of labeling a child provides the basis for further research. New research will give more insight into the etiology of the problem. As a result of inquiry into etiology, prevention and treatment possibilities for each category of exceptionality may be improved (Cruickshank, 1971; Kramer, 1975; MacMillan, Jones, & Aloia, 1974). Without making categorical distinctions educators and physicians cannot discover causes of various disorders.

Finally, the third purpose of labeling a child is to obtain financial support for research, training, and delivery of services for the child. Gallagher, Forsythe, Ringelheim, and Weintraub (1975) report that an increase of 300 percent in the money provided for special education for handicapped children from 1966-1972 was the result of categorical classifications. Legislative action designed to aid the handicapped has also been based on labels and categories of special students (Trudeau, 1972).

Gallagher (1976) described three negative purposes of labeling. The first purpose provides a means for tranquilizing professionals. They can apply labels to children without following differentiated programs of treatment, i.e., labels are applied to fill a need for closure on a difficult diagnostic issue. The second negative use of a label is that a label can serve as a

means to maintain a social hierarchy. By keeping minority children away from educational opportunities they are forced to remain at the bottom of the social ladder. The basic purposes of special education programs were distorted in some situations, in order to remove troublesome minority group children from regular education programs. Special education has been used as "an exclusionary process disguised as a remedial process" (Gallagher, 1976).

The third negative use of labeling focused problems on the individual. It ignored the complex social and ecological issues that needed reform (Galigher, 1976). Needed social reform was allayed because it was the child who was labeled that needed a specific treatment program, not the society that produced that child.

To answer the issue of labeling exceptional children, in 1972, Health, Education, and Welfare Secretary Elliot Richardson commissioned a review of the classification and labeling process. As a result, the assessment of the consequences and procedures of labeling were examined by Nicholas J. Hobbs in an extensive review of all aspects of the topic. The findings of the Hobbs study are presented in detail in two publications, Issues in the Classification of Children (Hobbs, 1975) and a summary report, The Futures of Children: Cateogires, Labels, and Their Consequences (Hobbs, 1974).

As a result of Hobbs' (1974) study seven priority recommendations were made. These recommendations were forwarded because of their urgency and need for immediate attention. These priorities

include (1) support for parents, (2) improved residential programs for children, (3) fairness to disadvantaged and minority group children, (4) improved classification systems, (5) better organization of services, (6) help for children excluded from school, and (7) new knowledge for classifying children.

Hobbs (1975) went on to state that the knowledge base for classifying children and designing appropriate programs for them is inadequate. Major policy changes are adopted without evidence of their effectiveness. Research must be provided to improve classification systems themselves.

Blatt (1972), Dunn (1968), Gallagher (1976), Johnson (1969), and Jones (1972) have all discussed the detrimental effects of labeling a child. But, the empirical literature provides no conclusive evidence for or against the labeling controversy (MacMillan et al., 1974). However, the majority of special educators view labeling as detrimental. This view seems to have been unchallenged especially when the accounts of litigation are considered.

The present study focused on the priorities of improved classification systems for exceptional children by examining behavioral characteristics of these children exhibited in public school classrooms. An attempt to add to the knowledge base was made by quantifying actual behavioral characteristics displayed by children already labeled as educable mentally retarded, emotionally handicapped, and learning disabled.

Given the current state of our knowledge and the intimate relationship among mental retardation, emotional handicaps, and learning disabilities the diagnostic goal is to aid the individual in developing behaviors that are acceptable to societal standards. The advocate of behavior modification is not concerned with the behavioral characteristics of the child. The collection of empirical data should point out the weaknesses of our diagnostic categories when behaviors exhibited by each group are compared.

In summary, to date no systematic attempt has been made to compare the classroom behavior of EMR, EH, and LD children. The purpose of this investigation was to provide empirical quantification of data regarding the behavioral characteristics for samples of exceptional students representing EMR, EH, and LD populations in the public schools. It was hypothesized that when comparing groups of educable mentally retarded, emotionally handicapped, and learning disabled students in the public schools no differences would be observed in the behavioral characteristics of each group.

Procedures

To test the hypothesis of no significant differences of behavioral characteristics among educable mentally retarded, emotionally handicapped, and learning disabled students a non-experimental procedure was used. A field study approach (Kerlinger, 1973) using direct observations of each student

examined the behavioral characteristics exhibited by each student from each diagnostic category in two educational settings: (1) the regular classroom and (2) the special education resource room.

Direct observation of operationally defined non-task oriented classroom behaviors yielded frequency counts that were subjected to data analysis. The frequencies of the behavior counted produced means that were compared using a visual graphic representation and a two-way analysis of variance repeated measures procedure.

Subjects

Sixty subjects participated and were randomly selected from a population of 11 and 12 year old exceptional children from the Hillsborough County Schools, Tampa, Florida. Specifically, 15 students from the educable mentally retarded, emotionally handicapped, and learning disabled diagnostic categories were selected for observation. Fifteen non-handicapped students were also randomly selected to serve as a control group for the observational technique. Each exceptional student selected had been certified as either EMR, EH, or LD according to Florida Department of Education criteria (Florida Department of Education, 1976; Florida Department of Education, 1977).

Setting

Observation of subjects for this study took place in two educational settings in the public schools. Each subject was observed six times; three times in the regular classroom and three times in the resource room class.

The regular classroom is defined as any academic class that the subject has attended for at least six weeks prior to the observation procedure. Included in this setting were classes in language arts, English, social studies, science, and mathematics. The resource room is defined as a special education classroom to which students are assigned for one or more 45 minute periods per day (not exceeding three 45 minute periods per day for the purpose of this study). In the resource room the special education student (i.e., EMR, EH, LD) received special remedial or tutorial instruction in specific academic skills and/or social interaction similar to those described by Hammill (Hammill & Bartell, 1978).

Instrumentation

A behavior counting procedure directed observers to count non-task oriented and task oriented behaviors. These behaviors were operationally defined into two major dimensions of behaviors. The first eight categories were the non-task oriented behaviors; the final two categories were the task oriented classroom behaviors. Each was defined as follows:

Non-Task Oriented Behaviors

1. Gross motor behaviors: Getting out of seat, standing up, running, hopping, skipping, jumping, walking around, rocking in chair, disruptive movement without noise, moving chair to neighbor.

2. Disruptive noise with objects: Tapping pencil or other objects, clapping, tapping feet, rattling or tearing paper. (This was counted only if the observer could hear noise with eyes closed. Accidental dropping of objects is not included or noise made while performing gross motor behaviors above.)

3. Disturbing others directly and aggression: Grabbing objects or work, knocking neighbors' book off desk, destroying another's property, hitting, kicking, shoving, pinching, slapping, sticking with an object, throwing an object at another person, poking with object, attempting to strike, biting, pulling hair.

4. Orienting responses: Turning head and body to look at another person, showing objects to another child, attending to another child. (Must be four seconds to be counted; not rated unless seated.)

5. Blurting out, commenting, and vocal noise: Answering teacher without raising hand or without being called on, making comments or calling out remarks when no question has been asked, calling a teacher's name to get his/her attention, crying, screaming, singing, whistling, laughing loudly, coughing loudly. (Must be undirected to another particular child, but may be directed to teacher.)

6. Talking: Carrying on conversations with other children when it is not permitted. (Must be directed to a particular child or children.)

7. Other: Ignoring teacher's question or command, doing something different from that directed to do. (Counted only when other behavior counts are not appropriate.)

8. Improper position: Not sitting with body and head oriented toward the front, e.g., standing at desk rather than sitting, sitting with body sideways but head facing front (Becker, Madsen, Arnold, & Thomas, 1967).

Task Oriented Behaviors

1. Task oriented independent: Student completely involved in task independently of the teacher and is working on the task assigned to him/her.

2. Task oriented dependent: Teacher or teacher aide is directly assisting the student with the assigned task. It may include repeating or further explaining of directions (Walker, Mattson, & Buckley, 1971).

The behavior observation checklist required that each observer match occurrences of behavior in appropriate spaces provided for each designated classroom behavior.

Observers

Three advanced graduate students at the University of South Florida were trained in the use of the behavior counting checklist.

The observers counted behaviors exhibited by the subjects in six 20 minute time periods; three in the regular class, three in the special education resource room. Fifteen second intervals were used for the observational technique. A total of 60 minutes of observation time in each classroom setting yielded total frequencies on all ten categories of defined behavior.

Results

An Analysis of Variance Repeated Measures (ANOVR) procedure was performed to compare components of variance contributed by the exceptionality of the child by classroom setting for behavioral characteristics (i.e., task oriented and non-task oriented behaviors). Significant differences were indicated for the interaction of exceptionality of child by classroom setting. Results suggested that the mean frequency of non-task oriented behavior did not differ significantly when exceptional students were placed in the special education resource room. However, each category of exceptional child, when observed in the regular classroom, showed wide variation in the mean frequency of non-task oriented behaviors.

Examination of the results for task oriented behaviors suggested that significant differences existed among the three categories of exceptional children (i.e., EMR, EH, and LD). Mentally retarded and learning disabled students showed significant differences in

task oriented behaviors. Emotionally handicapped students, however, did not show any difference in mean frequencies between those yielded for educable mentally retarded and learning disabled students. These results suggest that the hypothesis that there are no differences in task oriented behavioral characteristics of the three diagnostic categories of mildly handicapped children observed may be untenable.

A final ANOVR procedure compared the mean frequencies, task oriented and non-task oriented behaviors, of the three categories of exceptional student and one group of non-handicapped students in the regular class. Non-handicapped children received significantly lower mean frequency scores than did the exceptional child groups. The statistical differences obtained demonstrate that the behavior checklist used by the observers discriminated between handicapped and non-handicapped groups of students.

To establish reliability for the observers a coefficient of observer agreement was calculated (Medley & Mitzell, 1963). A second expert observer joined each of the observers to obtain frequencies of behavior to be compared to a criterion rating. These reliabilities were 74, 38, and 86 percent.

A total reliability coefficient (Myers, 1972) was calculated to determine the accuracy of the observational technique. Coefficients of .65 and .64 were obtained for non-task oriented and task oriented dimensions of behavior across all observers. These coefficients are sufficiently high to determine the

reliability of the observational technique considering the descriptive nature of the investigation.

Conclusions

The results obtained in this investigation suggest that differences in the frequencies of defined behavior of EMR, EH, and LD students existed when they were observed in the regular classroom setting and rated on non-task oriented behaviors during this study. But, more importantly, these same children when observed in the special education resource room did not differ significantly in mean frequency of non-task oriented behavioral characteristics.

The hypothesis of no differences in behavioral characteristics among the three groups is supported in part by the evidence that resource room non-task oriented behaviors are lower than in the regular class and show no statistically significant difference in mean frequencies. When rated on frequency of task oriented behaviors there were significant differences among the three groups of students. Learning disabled and emotionally handicapped students showed lower mean frequencies on the task oriented behavioral characteristics. However, in the special education resource room the overall mean frequency of task oriented behaviors increased over those observed in the regular class.

Behavioral characteristics, as defined in this investigation, for the exceptional children are easily distinguishable from

non-handicapped students. All analyses yielded significant differences between the non-handicapped child and the exceptional child in the regular classroom.

Implications

Because of the descriptive nature of this investigation and because no intervention procedures were employed, no causal relationships can be forwarded. However, the results favored resource room placement for exceptional students. More specifically, the lower mean frequencies of non-task oriented behavior and the higher mean frequencies of task oriented behavior in the resource room permit several additional hypotheses to be forwarded. These hypotheses are centered around the issue of labeling exceptional children and may be examined as four separate issues: (1) efficacy of resource room placement, (2) noncategorical placement, (3) differential diagnosis, and (4) teacher preparation procedures.

Efficacy of Resource Room Placement

The special education resource room may provide the necessary structure that permits the mildly handicapped student to more adequately focus his/her attention on appropriate task oriented activities. The definition of resource room programs presented by Hammill and Bartel (1978) states that each pupil can receive instruction individually or in small groups. Emphasis is placed

on specific skills that the child needs. These skills may be instructional, emotional, or behavioral.

In the resource room special education teachers can provide instructional and behavioral intervention that the regular classroom teacher may not have time to provide because of the number of children he or she may serve per day. Special education training also equips the resource room teacher with specific skills that foster academic, social, and emotional growth in exceptional children. Therefore, considering the training of the special class teacher, the number of students served in the resource room, and the structure provided, the resource room may provide the exceptional child with the atmosphere needed to increase task oriented activities and reduce non-task oriented behaviors.

Noncategorical Placement

In an effort to reduce the negative effects of labeling students as educable mentally retarded, emotionally handicapped, and learning disabled, educators have turned to generic labels, categories, and programs (Becker, 1978). The present investigation may provide support for noncategorical programs because of the non-significant differences in the non-task oriented behavioral characteristics of the mildly handicapped students in the resource room programs.

Before generic programs can be accepted as the most appropriate programming procedure for these children, further descriptive studies remain to be undertaken. This study does provide additional data to support non-categorical placement on the basis of similar behavioral characteristics of exceptional children in the special education resource room.

Differential Diagnosis

In order to group children in a functional way, a child's performance on a specified educational task must be measured precisely and continuously. Hallahan and Kauffman (1977) suggest that children be considered candidates for special education on the basis of specific social or academic performance deficits, and not solely on the basis of standardized test scores or clinical impressions. Educable mentally retarded, emotionally handicapped, and learning disabled children have a great deal in common. It is nearly impossible to separate them into the traditional categorical groupings based on performance in the classroom (Hallahan & Kauffman, 1976, 1977; Kauffman, 1977).

Common behavioral characteristics among traditional groupings of exceptional students may or may not be the result of common etiologies (Gardner, 1977). O'Grady (1974) found that children labeled as learning disabled and others labeled as emotionally handicapped exhibited similar patterns of language difficulties. Bryan and Bryan (1975) described the emotional disturbance features

of learning disabled children. Neisworth and Greer (1975) described the functional similarities of learning disability and educable mental retardation. No exceptional learning or behavior characteristic is categorically or inherently inappropriate or inadequate (Gardner, 1977).

Results of this study, examining the behavioral characteristics of mildly handicapped students, offer further support for the notion that an adequate differentiation among the groups of EMR, EH, and LD children is an extremely difficult task. The results suggest that the use of behavioral data as a diagnostic measure may not differentiate among the three groups of exceptional students. Placement of students in special classes based on diagnostic categories may be unnecessary when considering the aspects of non-task oriented and task oriented classroom behaviors.

It may also be that the particular type of classroom structure offered in the resource room may permit differences in behavioral characteristics among the three groups to disappear. The regular classroom setting may enhance the ability of observing differences in behavioral characteristics. Observations in the special education resource room setting may show that non-significant differences found among the three categories of exceptional children may be due to the setting and structure found there.

Teacher Preparation

Institutions of higher education have traditionally trained special education teachers to program for a single exceptionality

of child. Teacher preparation practices are based on the assumption that each category of exceptional child is a distinct and separate unit. This traditional categorical system required specific differential diagnosis where emphasis was placed on etiology that resulted in unique characteristics for each group of exceptional child.

No suggestion is made here that personnel preparation undertaken by departments of special education in American colleges and universities abandon their categorical methods. What is suggested is that the issue of categorical programming is clouded by results of empirically based research.

There is a myriad of differences which can occur in exceptional children. The application or removal of labels will not diminish these differences. Each child requires an individually prescribed program for him/her to make the most progress possible.

Recommendations for Future Research

Since data obtained in this observational study represents a single facet of behavioral functioning of exceptional children in the public schools, there is a need to empirically evaluate additional variables that may effect that behavioral data. Also, there is a need to examine alternate methods of data collection in future attempts to replicate the findings presented here. Suggestions are offered for future research based on these two notions: (1)

additional variables that may impinge upon exceptional child behaviors and (2) research methods that may provide additional support for the behavioral data collected and presented in this research.

Variables in Future Research

Becker (1978) examined the learning characteristics of educationally handicapped and educably mentally retarded children. He hypothesized that there were differences in the way that these two groups of children approach problem solving situations. These results may be intuitively predicted. It may be expected that the retarded group would differ on tasks related to intelligence and mental age. Although the present study collected data on intelligence and achievement (see Appendix C) no attempt was made to examine differences that these additional variables may present among the groups of exceptional children. Future research needs to clarify not only approaches to problem solving activities but also cognitive styles for the mildly handicapped.

Directly related to the variable of congitive style is the rate of skill acquisition. Academic, social, and behavioral progress rates need to be considered. Longitudinal research with follow-up data would provide evidence for any differences or similarities among groups of handicapped students.

Differences in factors such as IQ, sex distributions, socio-economic status, and length of placement in special educational

programs are a few of the additional variables requiring investigation. Hallahan and Kauffman's (1976, 1977) contention that there may be no behavioral differences among groups of mildly handicapped children must be examined considering these variables. Proposed research should incorporate these variables in an attempt to empirically establish differences or similarities of classroom functioning for these children.

An additional variable not included in the research reported here is the teacher component. Teaching styles, length of service, professional preparation, and teacher expectancies will also influence behavioral characteristics of special needs students. Random selection procedures attempt to eliminate the variable of differences in teacher behaviors but further research concentrating on this component may provide additional data regarding behavioral characteristics of exceptional children.

Research Methods

Observational studies attempt to document teacher behaviors and student behaviors in the classroom. Studies have been undertaken to provide methods for educators to determine the effectiveness of curriculum methods, teacher attitudes, interaction styles, and student responses. The area of exceptional child education has not been the subject of large scale observational studies. The studies that are available do provide program planning information to practitioners in the field. But there is still a need to determine

as many of the most effective educational methods possible to enable special needs students to reach their maximum potential.

Improvement of the observational process is desirable to understand the behavioral information occuring in the classroom. This behavioral information compared to the suggested variables for future research will widen our knowledge base.

The interpretations of results of this behavior oriented study are based on ten operationally defined behavior categories. These categories were intended to be mutually exclusive of the types of classroom behaviors exhibited by exceptional child subjects. With additional experience in using the observational behavior checklist, future research will help refine the operational definitions. It was statistically shown that the behavior checklist discriminated between handicapped and non-handicapped children. However, potential alterations in the definitions of the categories of behavior by the addition of categories, or perhaps the deletion of presently used categories, may enhance the ability of the behavior observation procedure to discriminate key behavioral factors. In other words, a fine tuning of the behavioral categories may provide an increased degree of experimental reliability.

Alteration of the process that observers use may also provide for more finely tuned data. Procedures could be used that rotated each observer from observation site to observation site. This would enable each observer to observe every child in the study. The present study used an alternate method of observer assignment to observation

sites. Because of high travel costs among schools in Hillsborough County each observer was assigned schools in close geographic proximity to each other. Future research may use an alternative approach to the observation process.

To completely develop the observational instrument different sample sizes and different age groups of subjects should be used. Different age groups most likely will give different frequency levels of observable classroom behavior. Larger sample sizes will increase the power of the checklist to discriminate among the characteristic behaviors of educable mentally retarded, emotionally handicapped, and learning disabled children and youth.

In summary, future research must attempt to clarify the characteristics of exceptional children. There is a tremendous need to identify those characteristics that will enable each teacher to foster maximum success for children with special needs. The type of research that quantifies classroom behaviors coupled with critical interpretations of mental age, IQ, achievement levels, and cognitive style will enable meaningful statements to be made about the nature and dimensions of importance of the successful programming of exceptional children.

APPENDICES

APPENDIX A

OPERATIONAL DEFINITIONS OF OBSERVED CLASSROOM BEHAVIORS

A behavior counting procedure directs observers to count maladaptive behaviors or adaptive classroom behaviors. The maladaptive behaviors are incompatible with learning and may be defined operationally as follows:

1. Gross motor behaviors: Getting out of seat, standing up, running, hopping, skipping, jumping, walking around, rocking in chair, disruptive movement without noise, moving chair to neighbor.

2. Disruptive noises with objects: Tapping pencil or other objects, clapping, tapping feet, rattling or tearing paper. (This will be counted only if the observer can hear noise with eyes closed. Accidental dropping of objects is not included or noise made while performing gross motor behaviors above.)

3. Disturbing others directly and aggression: Grabbing objects or work, knocking neighbors' book off desk, destroying another's property, hitting, kicking, shoving, pinching, slapping, sticking with an object, throwing an object at another person, poking with object, attempting to strike, biting, pulling hair.

4. Orienting responses: Turning head and body to look at another person, showing objects to another child, attending to another child. (Must be four seconds to be counted; not rated unless seated.)

5. Blurting out, commenting, and vocal noise: Answering teacher without raising hand or without being called on, making comments or calling out remarks when no question has been asked, calling teacher's name to get his/her attention, crying, screaming, singing, whistling, laughing loudly, coughing loudly. (Must be undirected to another particular child, but may be directed to teacher.)

7. Other: Ignoring teacher's question or command, doing something different from that directed to do. (To be counted only when other behavior counts are not appropriate.)

8. Improper position: Not sitting with body and head oriented toward the front, e.g., standing at desk rather than sitting, sitting with body sideways but head facing front (Becker, Madsen, Arnold, & Thomas, 1967).

Maladaptive behaviors are the dependent measures. To clarify the range of behaviors exhibited in the classroom, adaptive behaviors are defined for the observer. These behaviors are divided into two groups:

1. Task oriented independent: Student completely involved in task independently of the teacher and is working on the task assigned to him/her.

2. Task oriented dependent: Teacher or teacher aide is directly assisting the student with the assigned task. It may include repeating or further explaining of directions (Walker, Mattson, & Buckley, 1971).

The total maladaptive behavior score consists of eight types of maladaptive behavior as defined above. Adaptive behavior is the absence of maladaptive classroom behaviors as defined.

APPENDIX B

GENERIC SERVICES FOR EXCEPTIONAL CHILDREN

In the 1960's special educators debated whether or not brain damaged and emotionally handicapped children should be combined into one category (Bower, 1965; Messinger, 1965). Today the same debate continues but on a broader scale. Some special educators (Forness, 1976; Hallahan & Kauffman, 1976, 1977; Lilly, 1977; Taylor, Artuso, Soloway, Hewett, Quay, & Stillwell, 1972) advocate serving all mildly handicapped children (EMR, EH, LD) in one generic category. This section will describe three special projects using generic categories for the traditional classifications of exceptional students. The three programs to be described include (a) the California Master Plan for Special Education, (b) UCLA Neuropsychiatric Institute School, and (c) the Madison School Plan.

California Master Plan

The California Master Plan for Special Education (1974) seeks to equalize educational opportunities for all children in need of special education services. Instead of labeling children by categories, the Master Plan designates "individuals with exceptional

needs" for all children receiving special services. The Master Plan states that this change corrects two longstanding problems: (1) stigmatization by label and (2) rigid categorical programming and funding which imply that children must be grouped by handicap rather than educational need.

The most important goal of special education stated in the Master Plan (1974) is to reduce the impact of disabilities. Individually tailored programs are provided to reduce or eliminate the handicapping effects of various disabilities on some exceptional children. Individuals are educated in terms of their abilities, not their disabilities.

The classification system in California uses a generic categorical system. Only four subclassifications of "individuals with exceptional needs" are described. The classifications are only used for data collection and reporting purposes. They are (1) communicatively handicapped, (2) physically handicapped, (3) learning handicapped, and (4) severely handicapped. The objectives for the classification system are to (1) relate pupils to educationally relevant groupings, (2) relate pupils to appropriate programs and services, and (3) be simple and efficient--yet sufficient for data analysis, program administration, and public support.

The previously existing categories of exceptional students are grouped under the four new program subclassifications as follows:

1. Programs for the communicatively handicapped
   - Deaf
   - Deaf-Blind
   - Severely hard of hearing
   - Severely language handicapped
   - Language and speech
2. Programs for the physically handicapped
   - Blind
   - Partially seeing
   - Orthopedically handicapped
   - Other health impaired (including drug dependent and pregnant minors)
3. Programs for the learning handicapped
   - Learning disabilities
   - Behavior disorders
   - Educationally retarded (EMR)
4. Programs for the severely handicapped
   - Developmentally handicapped
   - Trainable mentally retarded
   - Autistic
   - Seriously emotionally disturbed

The generic classification system using learning handicapped for the traditional categories of EMR, EH, and LD attempts to make appropriate services available to all exceptional individuals and eliminates the negative effects of labeling a student who needs specialized services.

The Third Annual Evaluation Report 1976-1977 (1978) for the California Master Plan showed a trend toward placement of pupils in less restrictive environments. The number of students who were served in resource room programs increased, and the number of students in special classes and special centers decreased. An increase was noted in the number of students who received special education services and who spent some portion of the day integrated into regular classes.

The implementation of the Master Plan has provided improved services for California's exceptional individuals. This has been attributed to the effective planning and efficient implementation procedures.

UCLA Neuropsychiatric Institute School

Another setting which used a non-categorical approach to the education of exceptional children was the UCLA Neuropsychiatric Institute School (Forness, 1976; Forness & Langdon, 1974). The school served children from inpatient wards of a child psychiatry and mental retardation center. Types of children included in the school were autistic, severely to mildly retarded, emotionally handicapped, and learning disabled children.

The goal of the school was to prepare each child for functioning in a regular or special classroom setting in the public schools. The school is organized without traditional educational labels or medical and psychiatric descriptions.

At the most basic level there is a preschool in which the child is placed and behaviors are recorded under various reinforcement schedules. The results are used to determine the child's level, initial placement is based on past school performance and on standardized achievement tests. Then the child may be placed in a pre-academic or academic class. In the pre-academic class emphasis is placed on individual instruction in skills he/she will need for classroom learning. The second, the academic classroom, emphasizes skill subjects such as reading and math. The high school level is composed of two sections, one for students who may return to regular high school programs and another for remedial students.

In all classrooms children are thought ready for classroom functioning when they have moved through a hierarchy of incentives, that is, at each level specific reinforcers arranged in a hierarchy provide incentives until the child engages in school work solely for the satisfaction of acquiring skills or competence. Not every child attains the highest level before being discharged from the school. But, each child has received individualized programming based on his/her performance regardless of his/her diagnostic category.

Madison School Plan

In the Santa Monica, California, Public Schools a comprehensive model for noncategorical special education provides educational

services for mildly retarded, emotionally handicapped, learning disabled, hearing handicapped, and speech handicapped. It is often referred to as the Madison School Plan (Taylor et al., 1972). It is a learning center located in a regular elementary school. Placement in the learning center is based on the child's readiness for regular classroom functioning. Each child is assigned to spend as much time as possible in the regular classroom. The learning center is made up of four classroom levels based on the child's pre-academic and academic skills, his/her ability to learn, and on his/her response to regular classroom rewards and reinforcers.

The Pre-academic I level places emphasis on learning to pay attention and following directions. There is no group instruction and children receive checkmarks as reinforcement at regular intervals. Pre-academic II consists of children who can handle more formal demands of the regular classroom. The program emphasizes remedial-academic work in group participation. Rewards are still provided for appropriate on-task behaviors. The third level, Academic I provides a simulated regular classroom. Students work as a large group and receive grades at hourly intervals. Academic II is the regular classroom in which all Pre-academic II and Academic I children spend as much time as they are able. Teachers in the regular classes who have children assigned part-time to the learning center give them daily ratings similar to the grades received by Academic I students.

Summary

In the programs described it has been demonstrated that several categories of handicapped children can be grouped together for instructional purposes. Forness (1976) cautions that whether such educational programs will be any less detrimental than those more widely used today remains to be seen.

APPENDIX C

CHRONOLOGICAL AGE, ACHIEVEMENT LEVEL, AND INTELLIGENCE QUOTIENTS FOR EXCEPTIONAL STUDENT SUBJECTS

Educable Mentally Retarded

Subject's Age	Achievement Levels			Full Scale IQ
	Reading	Spelling	Arithmetic	
11.8	1.2	1.4	1.0	43
15.7	2.1	2.0	2.2	55
11.8	K.5	K.5	K.5	60
11.8	1.5	1.3	1.2	59
11.7	1.2	1.0	1.4	58
11.5	K.4	1.1	K.6	56
10.1	1.5	1.6	1.4	56
10.9	1.7	1.7	1.0	60
9.4	1.7	1.6	1.2	56
10.3	K.5	K.5	K.5	64
11.5	K.8	1.2	K.2	67
11.9	1.1	1.4	K.3	70
12.3	1.1	1.5	2.0	67
11.6	1.8	1.4	1.4	55
11.8	1.3	1.4	1.2	64

Emotionally Handicapped

Subject's Age	Achievement Levels			Full Scale IQ
	Reading	Spelling	Arithmetic	
11.7	3.5	2.7	3.0	79
11.1	6.7	2.6	3.2	100
12.0	3.2	2.6	3.9	71
12.6	3.5	3.9	4.2	85
11.9	1.6	2.0	3.9	105
11.3	5.3	4.5	4.5	85
12.0	2.6	2.9	3.3	100
12.5	3.9	3.4	4.5	89
11.9	1.9	1.8	2.8	102
12.7	1.3	1.4	1.0	78
11.10	4.4	4.1	3.8	100
11.10	2.5	2.6	4.2	89
11.7	1.9	2.0	2.4	74
11.8	2.2	2.0	3.6	83
11.7	7.0	5.7	4.5	105

Learning Disabled

Subject's Age	Achievement Level			Full Scale IQ
	Reading	Spelling	Arithmetic	
12.6	1.4	1.4	2.4	79
12.7	2.4	3.4	3.0	91
12.9	3.0	2.4	3.4	88
11.10	2.2	1.3	2.2	94
12.1	1.5	1.4	3.0	107
11.3	4.4	3.2	5.7	102
10.11	2.2	2.3	3.8	79
11.7	4.2	3.2	3.9	103
12.0	1.2	1.3	1.4	87
11.7	1.3	1.3	1.8	83
12.7	1.2	1.8	4.2	84
12.2	7.6	3.9	9.2	107
12.0	4.2	3.2	3.9	104
11.6	2.2	3.2	5.7	88
11.1	1.2	1.3	3.0	86

APPENDIX D

FLORIDA DEPARTMENT OF EDUCATION
DEFINITIONS OF EXCEPTIONAL STUDENT CATEGORIES

I. Educable Mentally Retarded

An educable mentally retarded student is one who is impaired in intellectual and adaptive behaviors and whose development reflects his reduced rate of learning.

II. Emotionally Handicapped

The emotionally handicapped student is one who exhibits persistent and consistent severe behavioral disabilities which consequently disrupt his own or others learning processes. For the emotionally handicapped child the inability to achieve academic progress or satisfactory interpersonal relationships cannot be attributed to physical, sensory, or intellectual deficits.

III. Learning Disabled

Learning disabled students exhibit disorders in one or more of the basic psychological processes involved in understanding or using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain

dysfunction, dyslexia, and developmental aphasia. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional handicaps, or environmental disadvantage.

APPENDIX E

INFORMED CONSENT PROCEDURES

University of Florida
Committee for the Protection of Human Subjects

1. TITLE OF PROJECT: Behavioral Characteristics of Educable Mentally Retarded, Learning Disabled, and Emotionally Handicapped Students

2. PRINCIPAL INVESTIGATOR(S): Stanley Sherry, Doctoral Candidate, Department of Special Education, 43 Norman Hall, University of Florida, Gainesville, Florida 32611, 904-392-0741

3. SUPERVISOR: Robert Algozzine, Associate Professor, Department of Special Education, 43 Norman Hall, University of Florida, Gainesville, Florida 32611, 904-392-0741

4. DATES OF ENTIRE PROPOSED PROJECT PERIOD:

   From: March 4, 1979 To: August 20, 1979

5. NAME OF FUNDING AGENCY: United States Office of Education, Bureau of Education for the Handicapped

6. PURPOSE AND PROCEDURES OF INVESTIGATION:

   Special education for handicapped children in the public schools emphasizes the placement of those children in regular school facilities whenever possible. Public Law 94-142, The Education for All Handicapped Children Act of 1975, is the federal legislation that mandates state and local school systems place special education students in least restrictive environments.

   Least restrictive environment in the public schools is defined by Congressional mandate. The definition specifies that to the maximum extent possible, handicapped children are to be educated with children who are not handicapped. Special classes, separate schooling, and other removal of handicapped children from the regular educational environment will occur

only when the severity of the handicap is such that education in regular classes cannot be achieved satisfactorily.

In Florida, the provision for education for handicapped students follows the Congressional mandate of PL 94-142. Florida Statute 230.23 states that "no student shall be segregated and taught apart from normal students until a careful study of the student's case has been made and evidence obtained which indicates that segregation would be for the student's benefit or is necessary because of difficulties involved in teaching the student in a regular class.

The special education cascade of services shows the range of services to handicapped children. These services extend from the regular classroom in the public schools to the full-time residential school.

Public school special education services are provided in regular classrooms, resource room classes, and full-time special classes.

In the regular classroom, handicapped students are educated along with non-handicapped children for specific periods per school day. The resource room class is a special education classroom to which handicapped children are assigned for one or more periods per day. In the resource room, the special education student receives remedial or tutorial instruction in specific academic skills and/or social interaction skills.

The full-time special class is reserved for handicapped students who cannot benefit from educational placement with non-handicapped children. The severity of the handicapping condition requires placement for some handicapped children in full-time special classrooms.

In the proposed study mildly handicapped students who have been placed by the Hillsborough County Schools (following Federal mandate and Florida statutes) in resource room classes will serve as subjects in an observational field study.

An attempt will be made to clarify the issue of placing handicapped students in special classrooms based on diagnostic category (i.e., educable mentally retarded, emotionally handicapped, or learning disabled) by examining the behavioral characteristics of handicapped students in two classroom settings.

More specifically, three groups of handicapped (EMR, EH, and LD) will be observed in the classrooms that they have been assigned

to by the Hillsborough County Schools--the regular classroom and the special education resource room.

Therefore, the purpose of the proposed study is to observe handicapped children in their natural classroom environments to provide empirical data about the commonality of the behavioral characteristics for educable mentally retarded, emotionally handicapped, and learning disabled children.

In the study, 60 subjects are required. All subjects are randomly selected from specific populations of handicapped students in the Hillsborough County Schools. Only those students who received special education services in the resource room class are selected. Fifteen subjects from each category of mildly handicapped students (i.e., educable mentally retarded, emotionally handicapped, and learning disabled) are randomly selected. Each handicapped student will be observed in the special education resource room class and the regular classroom. (All students have been placed in these classroom settings by the Hillsborough County Schools, following established procedures for handicapped children.) The frequency of task oriented and non-task oriented behaviors observed per observation period will produce means for each classification of exceptionality for each classroom designation. The data will be examined using an analysis of variance procedure to yield information concerning (a) frequencies of maladaptive behaviors and their relationship to educable mentally retarded, emotionally handicapped, and learning disabled groups, (b) whether there is a difference in behaviors dependent upon special class or regular placements, and (c) whether there is an interaction between class placement and category of exceptional student.

7. ANTICIPATED RISK AND/OR POTENTIAL BENEFITS:

The subjects in the present study will not be exposed to the possibility of injury, including physical, psychological, or social injury as a consequence of participation in the project. The observer will not be a participant in any classroom activity. There will be no subject-observer interaction. The observational process directs each observer to record frequencies of specifically defined behaviors. A checklist format is provided for ease of data collection for each observer.

The Hillsborough County Schools has approved the observational process. It is standard procedure for the Staff Development Division to approve any research proposal to be implemented within the school district. The district will assume any responsibility and liability for children in the special classroom and regular classroom settings. Because of the classroom observation design of the study, the individual subjects will not accrue benefits from the procedure. Only descriptive data is to be obtained--no treatment or intervention procedure is proposed.

8. MANNER OF OBTAINING SUBJECTS. MONETARY COMPENSATION, AGE, AND NUMBER OF SUBJECTS IN PROJECT:

Sixty subjects from the fifth grade age population of students in the Hillsborough County Public Schools will be randomly selected. Fifteen subjects from each of three categories of mildly handicapped students and fifteen subjects from the normal school population are included in the random selection. All subjects will be fifth-grade age. Each handicapped child selected will have been certified by a school psychologist as educable mentally retarded, emotionally handicapped, or learning disabled according to school district and State of Florida guidelines for placement in special education programs.

This study represents a replication and extension of a pilot project that was performed in the Alachua County Schools in the Spring of 1977.

Procedures followed for random selection, and protection of subjects as approved by the Alachua County Schools will be followed. The Hillsborough County Schools have also approved the observation process similar to the approach used in Alachua County. The names of students will not be used. All data will be evaluated without knowledge of the student or the school from which the data was collected. Strict confidentiality is guaranteed.

9. ATTACH A COMPLETED SAMPLE OF THE INFORMED CONSENT WHICH HAS BEEN PREPARED ACCORDING TO THE COMMITTEE GUIDELINES:

Since the study is a descriptive field study only, and there is no direct interaction between observers and subjects, no risk is involved. For the purposes of the study, all subjects remain anonymous. They are unaware of the observation procedure and are never identified by name. In addition, each subject will have the opportunity to withdraw from the study at any time.

Teachers whose classrooms are entered by observers will be requested to introduce the observer and explain that the "visitor" is there to observe for a short period of time and will make several visits to several classrooms in the building. All teachers will explain to the handicapped and normal students the brief procedures as specified on the attached informed consent form.

Each teacher will be requested to sign the form stating that the information has been read to the class.

Teacher Introduction of Observers in the Classroom

University of Florida

Committee for the Protection of Human Subjects

Directions to Participating Teachers:

On the initial visit of the observer in your classroom, please introduce him/her to your students by using the following script:

"I would like you all to meet (name of observer). He/she will be visiting our class today for a short time. He/she is here to see how we do things in our class. (Name of observer) will sit in the back of our class while we do our work. He/she will visit us several times during the next two weeks and will also visit other classes in our school. Let's make him/her welcome.

I have read the above information to my class and they understand that there will be an observer in the classroom.

Signature: _____

(Classroom Teacher)

Signature: _____

(Principal Investigator)

513 Weil Hall, University of Florida
Gainesville, Florida 32611
(904) 392-0741

BEHAVIOR OBSERVATION FORMAT

School _____

Time _____

Student ID # _____

Regular Class _____ Resource Room _____

Each student is to be observed for a total of 20 minutes. Make sure that there are no transitional periods within the 20 minute time block (i.e., class changes, waiting for class to begin, etc.).

Mark occurrences of observed behavior under the appropriate headings by using a (✓) checkmark. (One checkmark for each occurrence of the behavior.) Record all non-task oriented behaviors for each 20 minute period as well as task-oriented behaviors.

NON-TASK ORIENTED BEHAVIOR is defined as non-productive behavior and/or activity not assigned by the teacher at the time of observation. Use operational definitions, provided by the videotaped instructional set to classify the behaviors observed (eight categories of behavior).

TASK ORIENTED BEHAVIOR is defined as appropriate responses to teacher directed activities at the time of observation. Use operational definitions provided by the videotaped instructional set to classify the behaviors observed (two categories of behavior).

APPENDIX F

BEHAVIOR COUNTING CHECKLIST

		Total
Gross Motor Behaviors		
Disruptive Noise With Objects		
Disturbing Others Directly/Aggression		
Orienting Responses		
Blurting Out, Commenting, Vocal Noise		
Talking		
Other		
Improper Position		
Task Oriented Independent		
Task Oriented Dependent		

APPENDIX G

TRANSCRIPT OF VIDEO-TAPED INSTRUCTIONAL SET

Comparison of Behavioral Characteristics of Exceptional Children

Recent literature has raised some controversy regarding the differences in behavioral characteristics of exceptional children in public schools. The present study hopes to clarify some of that controversy by directly observing exceptional children in the classroom setting. Four observers will take part in this study. Each observer will be counting frequencies of behaviors--frequencies of specifically defined behaviors as exhibited by educable mentally retarded, learning disabled, and emotionally handicapped children in the schools. The purpose, then of this videotape is to standardize this process. I will be discussing four areas. The first area is observation setting; the second area is subjects and subject selection; the third area is instrumentation, i.e., the behavioral observation format for data collection; and the fourth area is the operational definitions for each area of behavior to be observed in the classroom.

Observational Setting

Observation of subjects for this study will take place in two educational settings in public schools. Each subject will be

observed six times in the regular classroom and three times in the resource room class. The regular class for purposes of this study is defined as any academic class that the subject has attended for at least six weeks prior to the observation procedure. Included in this setting are classes in language arts, English, social studies, science, and math. The resource room is defined as a special education classroom to which students are assigned for one or more 45-minute periods per day. For our study this will not exceed three 45-minute periods per day. In the resource room the special education students, that is the emotionally handicapped, the learning disabled, and the educable mentally retarded student receive special remedial or tutorial instructions in specific academic skills and/or social interaction.

Subjects and Subject Selection

In this study, 45 subjects are required. All subjects have been randomly selected from the population of 11 and 12 year old exceptional children in Hillsborough County Schools. Specifically, 15 students from the educable mentally retarded, 15 students from the emotionally handicapped, and 15 students from the learning disabled diagnostic categories have been selected for observation. To control for experimental mortality, a pool of subjects has been developed so that in the event of a subjects' being unable to complete this study, a replacement subject may be randomly selected from that pool. The range of the sample has been restricted in an attempt to minimize the variability of observed behavior often

characterized by children of different ages. Equally, it is likely that 11 and 12 year olds will be in the same grade in school, that is in the fifth grade. Therefore, it is anticipated that these procedures will yield a more homogeneous sample than selecting subjects from the whole elementary school population. Each subject that has been selected has been certified by a school psychologist or psychiatrist as being educable mentally retarded, learning disabled, or emotionally handicapped according to district and state guidelines for categorical placement in exceptional child programs in the schools. Also, subjects will not be identified for the purposes of this study, they will receive identification numbers and will remain anonymous.

Instrumentation/Behavioral Format

The behavioral observation format is provided. It requires that the observers mark occurrences of behavior in appropriate spaces provided for each designated classroom behavior. Non-task oriented behaviors are defined as nonproductive behavior and activity not assigned by the teacher at the time of observation. There are eight classifications of maladaptive behavior and we will look at each one of those as we look at the behavioral format. Task oriented behaviors, however, are defined as appropriate responses to teacher directed behavior at the time of observation. Behavioral observation format shows that there are two classifications of task oriented behavior and we will be looking at those specific task oriented behaviors and their definitions shortly.

The observers will count non-task oriented behaviors displayed by the subject in six 20 minute periods--three periods in regular classroom and three periods in the resource classroom. The observers will count non-task oriented and task oriented behaviors at 15 second intervals for each observation period. A total of 60 minutes observation time in each classroom setting will reveal frequencies of non-task oriented and task oriented behavior.

Let's take a look at the behavioral observation format and we will get an idea of the kind of charting that we will be doing and the kind of definitions that we will be using in looking at the exceptional children in each classroom setting. Here we see the first four categories of non-task oriented behavior. These are non-task oriented behaviors that are incompatible with learning and may be defined operationally as follows:

1. Gross motor behavior: This operational definition states that we should see behavior such as getting out of the seat, standing up, running, hopping, skipping, jumping, walking around, disruptive movement without noise, or moving a chair to a neighbor.

2. Disruptive noises with objects: The operational definition includes tapping a pencil or other object, clapping, tapping feet, rattling or tearing paper.

3. Disturbing others directly and aggression: This includes behavior such as grabbing objects or work, knocking neighbors' book off the desk, destroying another's property, hitting, kicking, shoving, pinching, slapping, sticking others with an object.

throwing an object at another person, poking with an object, attempting to strike, biting, and pulling hair.

4. Orienting responses: This is operationally defined as turning the head and body to look at another person, showing objects to another child, attending to another child. This must be four seconds to be counted and it is not rated unless the child is seated.

We see here the final categories on different non-task oriented behavior classification.

5. Blurting out, commenting and vocal noise: answering the teacher without raising the hand or without being called on, making comments or calling out remarks when no question has been asked, calling a teacher's name to get his or her attention, crying, screaming, singing, whistling, laughing loudly, and coughing loudly are included in the operational definition for this category.

6. Talking: This is merely defined as carrying on a conversation with other children when it is not permitted.

7. Other: This includes behavior such as ignoring the teacher's question or command, doing something different that what the child is directed. It is to be counted only when behavior counts are not appropriate.

8. Improper position: This is operationally defined as not sitting with body and head oriented towards the front. That is, standing at the desk rather than sitting, sitting with the body sideways with head facing front.

The final two categories are those categories of task oriented behavior and they are divided into two groups. The first one is:

1. Task-oriented independent: This is operationally defined as the student is completely involved in a task independently of the teacher and is working on a task assigned to him or her.

2. Task-oriented dependent: This is operationally defined as the teacher or teacher aid is directly assisting a student with the assigned task. They may include repeating or further explanation of the directions.

The checklist for frequencies of designed behaviors observed in the classroom is, therefore, made up of eight categories of non-task oriented behavior and two categories of task oriented behavior. When you are recording a frequency of behaviors occurring in the classroom, place checkmarks in the center column under the appropriate categorical heading, under the appropriate behavior for the appropriate operational definition. At the end of the 20 minute observation period, total each category of behavior in the final column under the word "Total."

Summary

In summary, the data will be recorded in terms of frequency of occurrence of non-task oriented behavior defined by this behavior counting procedure. The frequency of behavior for observation will be represented as a total score for each component of non-task oriented and task oriented behavior for each classification of exceptionality for each classroom setting. That completes our

description of the observation procedure for the study "Comparison of Behavioral Characteristics of Exceptional Children." Good luck to you all in your observational process. Good luck to you in your scheduling of students and scheduling of schools. Thank you.

APPENDIX H

RESEARCH DESIGN FOR DATA ANALYSIS OF FREQUENCIES OF BEHAVIORS EXHIBITED BY THE THREE GROUPS OF EXCEPTIONAL CHILDREN IN TWO CLASSROOM SETTINGS

		Non-Task Oriented	Task Oriented
EMR	Regular		
	Resource		
EH	Regular		
	Resource		
LD	Regular		
	Resource		

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BIOGRAPHICAL SKETCH

Stanley A. Sherry was born in Bryn Mawr, Pennsylvania, on September 29, 1948. He graduated from North Penn High School in 1966. He received his bachelor's degree in Psychology from Temple University, Philadelphia, in 1971; his master's degree in Special Education from Temple University in 1974.

He has taught public school classes for children called "emotionally disturbed" for six years. From 1971 to 1975 he taught an elementary level self-contained class for these students at the Montgomery County Intermediate Unit in Norristown, Pennsylvania. The following year he was a coordinator of programs for the emotionally disturbed in Montgomery County.

During the 1976-1977 academic year he was a work/study coordinator for high school aged disturbed students at the Alternative School in Gainesville, Florida. While there he was responsible for developing an innovative program for adolescents that placed them in on-the-job training sites in the community.

From June, 1977, to August, 1979, he completed program requirements for the Ph.D. degree in special education at the University of Florida. The areas of emphasis in his study included (1) emotional handicaps, (2) secondary level programs, (3) special

education administration, and (4) educational research. Upon completion of the doctoral program he will take a position in the administration of special education programs in the public schools.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Rex E. Schmid, Chairman
Associate Professor of Special Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Robert F. Algozzine, Co-chairman
Associate Professor of Special Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Charles Forgnone
Professor of Special Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Ralph B. Kimbrough
Professor of Educational Administration and Supervision

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Stuart E. Schwartz

Stuart E. Schwartz
Associate Professor of Special Education

This dissertation was submitted to the Graduate Faculty of the Department of Special Education in the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1979

Dean, Graduate School